

PROCEEDINGS of the
STATEN ISLAND INSTITUTE of
ARTS and SCIENCES



GOLDEN ANNIVERSARY
NUMBER

X1(?)
VOLUME II

PART I

OCTOBER, 1948



(Aerial Photograph by W. O. Davies)

"STATEN ISLAND LOOKS AHEAD"

View of construction at the Marine Park, Great Kills
Courtesy, Borough President Hall

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PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES, Vol. 11, Part 1, October, 1948. Published quarterly in October, January, April and July, by the Staten Island Institute of Arts and Sciences, 75 Stuyvesant Place, Staten Island, N. Y., and entered as second class matter at Staten Island, N. Y., under act of August 24, 1912. Roswell S. Coles, Editor.

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FOREWORD

This number of our *Proceedings* represents one of the contributions of the Staten Island Institute of Arts and Sciences to the commemoration of the Golden Anniversary of the City of New York which is being celebrated extensively this year. It is issued to coincide with our own Museum program on October 17, 1948. It represents also a new phase of our publications since it is the first number of a series to be published quarterly.

Mr. Stoddard's article deals particularly, and nostalgically with the Staten Island of fifty years ago. My own points out the contributions made by the Institute to Staten Island and the City during the half century we are here commemorating. Other articles will give the reader vignettes of our present day activities.

The officers and staff of the Institute as well as our members join in congratulating Mayor William O'Dwyer and Borough President Hall on the progress of the City and Borough under their administrations and Hon. Grover Whalen for his endeavors in making our Golden Anniversary a memorable event.

ROSSELL S. COLES
Director



CITY OF NEW YORK
OFFICE OF THE MAYOR
NEW YORK 7, N.Y.

As a citizen and as an Ex-Officio Trustee of the Staten Island Institute of Arts and Sciences, I offer my sincere greetings to this organization, which for sixty-seven years has advanced the cultural and scientific life of Staten Island. In music, the fine arts, engineering, natural history, photography, and many other branches of learning, the Institute has done admirable work.

With best wishes for every continued success,

Sincerely,

Mayor



CITY OF NEW YORK
PRESIDENT
OF THE
BOROUGH OF RICHMOND

CORNELIUS A. HALL
PRESIDENT

BOROUGH HALL, STATEN ISLAND 1, N.Y.

August 16, 1948.

Staten Island Institute of Arts & Sciences,
75 Stuyvesant Place,
Staten Island 1, New York.

Dear Friends:

It is always a pleasure for me to congratulate the Staten Island Institute of Arts and Sciences and to commend the fine work the Museum is doing for the cultural advancement of Staten Island.

This is particularly so at this time of the celebration of the Golden Jubilee of the Greater City of New York, and it is pleasant to remember that the Museum, even fifty years ago a going institution, was for a time housed in our own new Borough Hall.

You are truly an important factor in the history and advancement of the Borough of Richmond, and I am happy to wish you continued success and achievement.

Sincerely yours,

Cornelius A. Hall
President of the Borough of Richmond.

CAH:JBS.

1898 1948
MAYOR'S COMMITTEE
FOR THE COMMEMORATION OF THE
Golden Anniversary
OF
THE CITY OF NEW YORK
1 EAST 60TH STREET

OFFICE OF THE CHAIRMAN

September 10, 1948.

Mr. Roswell S. Coles, Director,
Staten Island Institute of
Arts and Sciences,
75 Stuveysant Place,
Staten Island, N. Y.

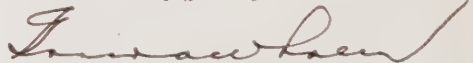
Dear Mr. Coles:

The Staten Island Institute of Arts and Sciences is an important factor in the cultural and educational work of the City of New York. Its influence in the life of the people of Staten Island repeatedly has been attested to by public officials and leaders in education and science.

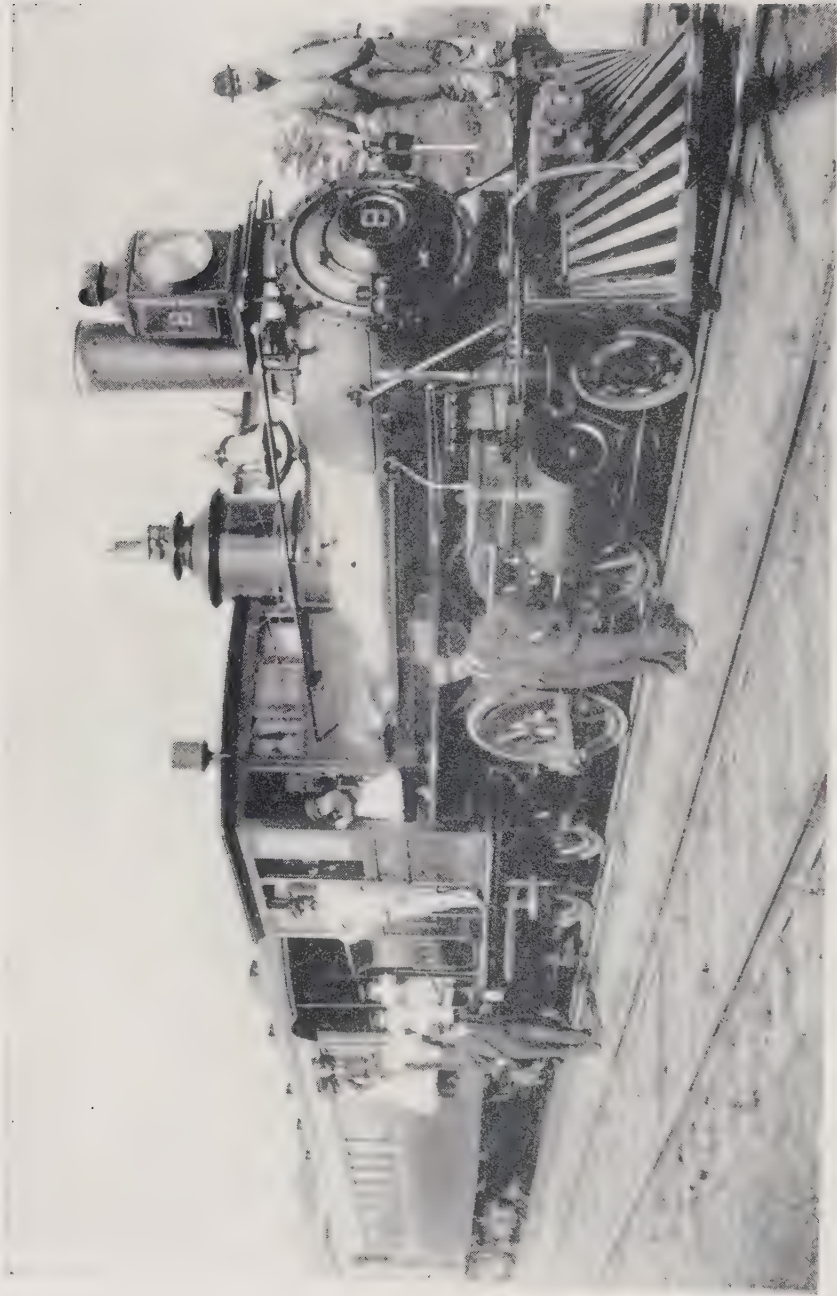
At this time, however, I should like to express my thanks and my deep appreciation to the officers and the staff of the Staten Island Institute of Arts and Sciences, who have been so helpful to the Mayor's Committee for the Golden Anniversary of New York. Their enthusiastic and energetic work was reflected in the excellent cultural exhibit at the Golden Anniversary Exposition.

On this occasion, I should like to extend my greetings to the Institute and its patrons. May the important work be continued and enlarged.

Sincerely yours,



C h a i r m a n



(Photograph by Clarence Sherry, c.1890)

A TRAIN OF WOODEN COACHES
Courtesy, S. I. Historical Society

Fifty Years Ago

CHARLES COLEMAN STODDARD

If I were to write a serious history of the past fifty years on Staten Island, I certainly would write it in terms of transportation. For in that time we have used almost every possible method, including shanks' mare, in our daily travels. But it is the improvements in the methods of getting about, not altogether local, that have been responsible for wider changes in our Island, including its remarkable increase in population, more than any other single cause.

When I first knew the Island, we were in the heyday of the modern bicycle. A few natives had begun to ride out into wider horizons, and countless strangers ("foreigners," if you please), particularly between New Jersey and the beaches, had come to view the byways of Staten Island for the first time. Trolley cars had just begun to supersede the few rickety horse cars. Automobiles had not yet arrived. We must remember that the horse was universal, that not a few oxen were in use about the farms and frequently met with upon the highways. Few roads outside of the incorporated villages had received more than a minimum of macadam. South Beach and Midland Beach were offering fine entertainment and were synonymous with the Island in the minds of most outsiders, who knew almost nothing beyond the scant means of reaching these resorts. A large portion of the Island was given over to agriculture, each settlement and village was largely a community in itself, and the five towns or townships (Northfield, Westfield, Castleton, Southfield and Edgewater) jealous of their prerogatives. Many of the inhabitants of the North Shore had never been farther than Richmond, and then only on court business, and those of the South Shore the same. It is easily understandable when for many it was a day's journey; and the stock answer to any query was, "I never had any business there—why should I go?"

Of course it was not all so primitive as this, but it was these instances that made the greatest impression on a newcomer. There were probably more small industries than there are today, and some important ones, particularly on the North Shore. Oystering still flourished at Mariners Harbor, Tottenville and Rossville; shipbuilding was carried on much in the same locations as now, with some flourishing yards at Tottenville; the dye works at New Brighton, which probably carried the name of Staten Island

farthest abroad, occupied its large plant and many separate buildings; and there were more breweries than at the present time, though catering almost exclusively to local trade.

The social glory of the middle years of the 19th Century had not altogether departed. Many of the fine old places on the hills throughout the Island and along the Shore Road (Richmond Terrace) were among the show places and the Castleton Hotel continued to attract a notable clientele until its destruction by fire in 1907.

My introduction to Staten Island occurred when the question of consolidation had about reached its accomplishment. But, to be frank, I was not at that time so much interested in political implications and arguments as I was in the beauty of the Island and its quiet restfulness in contrast with the heated pavements of New York.

The occasion was my being sent to report a trial in progress in the old courthouse in Richmondtown. I was scarcely unprepared for the journey since I had read, in Harper's Magazine, William H. Rideing's account of "A Spring Jaunt on Staten Island," and this was to be the beginning of a long series of explorations guided often by William T. Davis's incomparable "Days Afield on Staten Island."

With the exception of speed and possibly a few conveniences found on the boats of today, the trip from the Battery to St. George was little different. The Statue of Liberty was in the same place, but Governors Island, afterward extended, was much smaller. The Brooklyn shore and that of Bayonne, excepting for some industries at Bergen Point, were then heavily wooded, with some fine beaches, country clubs and private homes, and the same may be said for a considerable part of the north and east shores of our Island.

However, the approach to St. George was entirely different—different even from the familiar terminal destroyed by fire two years ago. There was no Borough Hall, no viaduct, no courthouse, no apartment houses; the wooded hills covered for the most part with well-kept residences and the skyline dominated by the single steeple of the old Reformed Church, the conical towers of the old Smith Infirmary (Staten Island Hospital) and the outstanding mass of Hotel Castleton.

One left the ferry to board a train of dingy wooden coaches drawn by a steam locomotive of a vintage so old as even then to be a curiosity. Thus we slowly chugged our way down the Island.

The trolleys had not yet reached Richmond, and it was necessary to go by railway either to New Dorp or to the Court House station (now Oakwood Heights). We chose the latter, where we were certain of a stagecoach or carryall to convey us to the courthouse.

The trip was unhurried and interesting. The railway between St. George and Clifton ran much closer to the water at that time, and there and beyond where it traversed a pleasant countryside afforded broad views of the Bay on one hand and of the Staten Island hills on the other.

This station at Oakwood has an interesting background. Most of the land in the vicinity belonged originally to the Guyon-Clark estate, the beautiful old manor house of which was razed as recently as 1925. When the railway was opened, in April 1860, the station was known as Harrison Gun Club station. It took its name from a small building that stood at the corner of Clark Avenue and the Amboy Road, later the site of the Elks Clubhouse, the rendezvous of Dr. John T. Harrison, Dr. Ephraim Clark, Commodore Vanderbilt, and other early Staten Island sportsmen. In course of time it became the Court House station, and early in the present Century was moved from its older site and changed to Oakwood Heights. The late William T. Davis always maintained that it should have been called "Hickoria," owing to the large number of hickory trees growing in the vicinity.

The stage that carried us to Richmond was driven by John Elliott, two of whose sons still reside in the village. The short ride through Clark Avenue was along a wooded country road marked by a few old houses. The road was rough in places, but the day was sunny and the hour early and we noted that several groups had chosen to walk. We often since have followed their example.

These court days in old Richmondtown at the turn of the century took on much of the atmosphere of a gala occasion, as they had done for almost two-hundred years. The aspect of the village itself is little changed except for the disappearance of some of the older buildings and some face-lifting on others. Lawyers, jurymen, witnesses, and the usual court followers crowded about the portico of the old Courthouse and the County buildings across the street, and many others came to meet and greet friends. The taverns—Dobler's, Rosenberg's and Pfaff's—noted island-wide for good food, were filled with animated groups, and I recall at a later date some horse-trading and other barter in the taverns and around the old horsesheds opposite St. Andrew's Church.



(Photograph by Geo. H. Tredwell, c.1899)

THE THIRD COURTHOUSE, Richmond

Courtesy, S. I. Historical Society

At that time almost everyone came to Richmond at one time or another, either for court business or to the County Clerks office across the street, now the Historical Museum, and my earliest recollection of many older Staten Islanders is associated with these buildings: the late Cornelius Hart, Crowell Conner, the venerable dean of the County Clerks office, Judge Stephen D. Stephens, C. Livingston Bostwick, and a host of others. It was on the steps of the Courthouse that I first had pointed out to me Cornelius G. Kolff, with his handsome black beard, Prince Albert coat, silk hat—and *red necktie*.

The execution of murderer Reinhardt, the last man to be hanged on Staten Island, had occurred almost two decades before, Jan. 14, 1881, but so deep was the impression on the community that it was still a common subject of conversation. The event took place in the courtyard of the "Old Jail," between that building and the Courthouse. While the public was not admitted, hundreds gathered outside on a cold, rainy morning. The old jail, erected in 1860, was replaced in 1896 by the present building, now the City Prison. It is interesting to record that when the latest restoration of the Courthouse was made, in 1933, the place was found where bricks

had been removed from the rear wall to receive one end of the gallows beam.

Many anecdotes center around this old jail, especially of a certain warden of the freer and easier days who seems to have been considerable of a humorist as well as an efficient public servant. One concerns the attempted suicide of one of his prisoners, who was attempting to hang himself in his cell. Instead of interfering with these intentions, the warden, in his excitement, rushed out to find a priest, but when the Reverend gentleman arrived an attendant had cut the man down and he was still whole and well, if not happy. On another occasion, a bitter night in winter, with the thermometer nearing zero, the warden and some of his friends were engrossed in a particularly exciting pinochle game. Somehow a prisoner had escaped, but not finding the weather to his liking decided to return to his comfortable quarters. Suddenly came a loud rapping on the door, and the warden, having to put down an interesting hand, was not in the best humor.

"Who is it?" he inquired, half opening the door.

"It's me, ———," shivering.

"How, the ———, did you get out? Well, what do you want?"

"I want to get in."

"You wanted to get out—now stay there till morning." The warden resumed his game.

The present Courthouse is the third to have been erected in Richmond. It was built in 1837. The first Courthouse was burned by the British occupational troops at the time of the Revolutionary War; the second, later occupied as a residence and a tavern, was burned in 1944. This building, which recently has been turned over to the Staten Island Historical Society for preservation is an impressive example of the architecture of the period. The interior is little changed, except for the replacing of the original flagstone floor of the main corridor by one of wood, and preserves many fine examples of hand woodwork of the early 19th Century. The bell-tower originally was surmounted by a handsome weathercock, which in time weathered away. The gilded ball, which now takes its place, is of serviceable if unromantic origin. The late Michael McCabe, in charge of repairing the damage and searching for something to use as a cap, came upon one of the large cast iron cuspidors that once graced the County Clerks office. This, inverted and properly gilded, still remains to complete the tower.

The building, in the beginning, was also used for confining prisoners, which accounts for several of the windows having heavy iron bars. The walls of the old courtroom could undoubtedly tell an interesting story. Many community gatherings were held here: spelling bees, school entertainments, commencement exercises, as well as more serious gatherings. Posters announcing these and of at least one elaborate minstrel and vaudeville program are still in existence. Some, too, will remember the Sheriff's famous New Years' dinners, usually held in the first-floor corridor, where an abundance of good food and good cheer were provided.

If this chapter of reminiscences centers around old Richmond-town, it is because that was the first part of the Island I knew intimately, and it was the starting point for many years for excursions to other places. There was the always pleasant walk down the Arthur Kill Road to Rossville, or over Richmond Hill and Manor Road to Eckstein's for dinner; the annual games of the New York Caledonian Club, at Semler's, in Grant City; and many outings of both local and outside clubs and organizations. The beaches of the South Shore were famous for their clambakes and shore dinners in summer, local sea-food was cheap and plentiful, and the roads afforded magnificent sleighing in winter. It was a common sight of a Sunday in Richmond to see as many as forty or fifty turnouts arriving for Mrs. Dobler's hospitable dinners.

What one misses most in travels about the Island is the grand old trees that once graced all our roadways. Some of these it was necessary to replace in the widening of streets, but more have been wantonly destroyed or have been ruined by the numerous brush fires and never replaced. Natural causes, too, have played their part in the depletion of our beautiful woodlands. The chestnut blight, which struck the Island in 1904-1906, spelled the end of many patriarchs, some of whose bleached skeletons stand as ghosts upon the hills; the severe winter of 1917-1918 took a heavy toll; and more recently the European elm disease has accounted for a host of our beautiful old elms.

Rossville deserves special mention. Fifty years ago it was one of the most richly beautiful spots on the Island. The wooded shores were unspoiled by industry and its many fine homes were at their best. The Seguire and Decker houses, the Lyon and Mason estates were notable show-places. These are gone, but several interesting buildings remain to lend a charm to this attractive old community.

A tear should be shed for the passing of the old Rossville Hotel, which stood between the water's edge and the Arthur Kill Road.

It accorded cooling refreshment to man and beast, and on many a hot afternoon I was wont to lean my bicycle against one of the columns of the long veranda and to seek out its low-ceilinged, quiet interior. It had been, a century ago, the rendezvous for oystermen and fishermen, and if their ghosts did not hover about, one could well imagine their presence in the suggestive surroundings of the old building.

Time, even fifty years, obliterates many memories, others are gilded by the sunset glow of association, but it is such trivia that are the beginnings of History. It is fitting to close with the Latin motto I once chose for a bookplate: *Forsan et haec olim meminisse juvabit*—and its free translation, “Perhaps, someday, it will be pleasant to remember even such nonsense.”



(Photograph by Geo. H. Tredwell, c.1899)

THE OLD ROSSVILLE HOTEL
Courtesy, S. I. Historical Society

The Staten Island Institute of Arts and Sciences

1898 — 1948

ROSWELL S. COLES

By the time of the Consolidation of the City in 1898 the Natural Science Association of Staten Island, the parent body of the present Institute of Arts and Sciences, already had completed 17 years of its existence. The Association was organized in 1881 with the purposes, as stated in its act of incorporation of 1885, "to collect and preserve objects of natural science and antiquity, with special reference to local matters, and to diffuse correct knowledge in regard to same, by means of publications, meetings and public lectures."

It would appear from this statement that the original members considered their duty as threefold: to establish a museum, to engage in educational activities and to be a *local* organization, dealing with our own community and aiding it in any way possible within the framework of our act of incorporation.

The first years of our development have been recorded in a "History of the Staten Island Institute of Arts and Sciences," written by Charles W. Leng and published in 1931 at the time of our own fiftieth anniversary. Fortunately Mr. Leng was one of our original members and could recall many of the events of which he wrote. The first meeting was held in a house then standing on the site of the present St. George theater parking lot, the home of William T. Davis's grandmother, Mrs. John C. Thompson. Later the organization met in P.S. 17 and at the Y.M.C.U. on Carroll Place.

But these did not offer a place to store the "collections which began to accumulate," and an offer of a room in the Village Hall on Lafayette Ave. was accepted. The Village Hall continued to be the home of the Association for fourteen years. In 1896 the collections were moved to the new Staten Island Academy building at 45 Wall Street.

Perhaps the first important event after Consolidation was the reincorporation of the Association on May 17, 1905, into the Staten Island Association of Arts and Sciences. This act established the basis of our present organization. The purposes of the organization were broadened to include the arts, sciences and history, but the major interest was still to be Staten Island. We were to maintain a Museum and Library, carry out an educational program by

lectures, meetings and by publications and finally work toward the preservation of plants and animals which are not harmful to man, and of places of beauty or historical interest.

A special program was held in the Hotel Castleton on November 12, 1906, to commemorate the twenty-fifth anniversary of the Association. This event was recorded in a Memorial Number of the *Proceedings*, issued March 15, 1907. Senator Howard R. Bayne, President of the Association from 1902 to 1930, summed up the accomplishments of the quarter-century: "Twenty-five years of study of nature on Staten Island have accumulated by insensible degrees specimens of local botany, mineralogy, geology, and zoology in great number, range and value. In the herbarium there are about 1500 local plants. In the geological collection every feature of interest is represented. Among the specimens of local fauna, members of the Association have made quite complete collections of fresh and salt water shells, moths, butterflies, beetles and other insects, birds' eggs, snakes and other reptiles. Local antiquities are represented by specimens of Indian life and by revolutionary and later relics, implements of war, coins and documents of many kinds and of varied and historical interest.

"It is said by those competent to judge that the museum of this Association is in certain departments probably one of the most complete and comprehensive local collections known."

However, as Senator Bayne pointed out, these collections were unavailable to the public at large. The Act of Incorporation of 1905 had looked forward to correcting this situation by authorizing the Commissioners of the Sinking Fund to set aside space in our new Borough Hall for a Museum and authorized the City to maintain the Museum. Room 309 was set aside and the City contributed annually \$4,000.00 for salaries and other expenses. Charles L. Pollard became Curator-in-Chief, a title later changed to Director, and one of his first duties was to move the collections from the Staten Island Academy to Borough Hall. The formal opening was held on May 23, 1908, with Borough President Cromwell giving the opening address.

So the Museum began its public career closely associated with consolidation and the new Borough of Richmond.

It was at this time that the formation of Association Sections for specialized study began. The first was a Section of Biology, approved by the Board of Trustees on June 9, 1908. Original members were: James P. Chapin, Alanson B. Skinner, Howard H. Cleaves, William T. Davis, Philip Dowell, Stafford C. Edwards

and Charles L. Pollard, with Mr. Pollard as Chairman and Philip Dowell as recorder. On March 5, 1909, an application of members was approved to form a Section of Art incorporating into its activities those of the previously formed Art Committee, and Dr. John Quincy Adams was elected Chairman. The Woman's Auxiliary also grew out of an Institute Committee which began in 1908. The Section of Historical Research was authorized in October 1909, with Edward C. Delavan, Jr., Chairman and S. McKee Smith, recorder.

The history of our Sections in the intervening years shows vicissitudes which one might expect from volunteer groups, with old ones becoming inactive and new ones taking their places. The present group organization of the Institute is set forth in another part of this issue of the *Proceedings*.

One of the important early activities of the Association had concerned the recording of information which has been obtained from careful study and observation of local matters.

By 1898 six volumes of the *Proceedings of the Natural Science Association* had been published. During the following half-century three more volumes followed; then seven of the Association of Arts and Sciences and ten more of Institute *Proceedings*. These twenty volumes contain a remarkable collection of information on Staten Island which can roughly be divided into the following subjects: 40 articles on local history; 17 on Indians; 50 on botanical subjects; 45 on geology and paleontology; 125 on zoology including birds, insects and mammals; 20 biographical articles. Also there are natural history records for the period covered, 190 reviews of literature relating to Staten Island as well as annual reports and records of the Institute and its sections and affiliated societies.

The monthly *Museum Bulletin* began as a single page in 1908 and after 73 numbers was superseded by a four-page monthly. Between 1942 and 1945 the Bulletin was enlarged and issued quarterly and, after that, monthly.

All this valuable Staten Island material has been indexed and is available for use in our library along with 10,000 volumes of books and periodicals. These collections are maintained for use of the public and the valuable material contained therein should be consulted by any student or writer interested in Staten Island.

By 1911 both the Museum and the Borough government had outgrown the arrangements in the Borough Hall. The City reconditioned the Norvell House on the corner of Hyatt St., and Stuyvesant Place, now the location of the Buck building, and the Mu-

useum was moved there. In 1913 Dr. Arthur Hollick became Director. Records show that at this time there was a considerable increase in the activities of the organization, both among young people and adults.

By 1916 a project of erecting a new Museum building was undertaken and due to the generosity of Staten Island citizens, a sufficient amount was raised to erect the basement and first floor of the present Museum building. The corner stake for the excavation was driven by Mr. Davis on May 22, 1917, and ground broken by President Bayne on May 31. The new building was opened to the public in September 1918, and the first Association meeting in the new building was held in December of the same year. The building stands on land belonging to the City and assigned to us by the Commissioners of the Sinking Fund on January 20, 1917.

A further incorporation in 1918 changed the name of the organization to the Staten Island Institute of Arts and Sciences without appreciably affecting its general structure. Dr. Hollick resigned as Director in 1919 and Mr. Leng was appointed his successor, taking office on June 1. Again there was an increase in activity leading to the completion of the two upper floors of the Museum in 1928.

The fiftieth anniversary of the Institute occurred in 1931. A feature of the celebration was the announcement of the establishment of the Natural Science Fund by Mr. Davis which added to the John J. Crooke Fund previously established by Dr. and Mrs. Nathaniel L. Britton and the D. N. Van Name Fund established by Mr. and Mrs. Charles A. Ingalls.

It was Mr. Leng's duty to record the accomplishments of his leadership in the history issued in 1931. The revival of the Bird Club, originally started in 1914, and the establishment of the Nature Club with its annual Natural History Records, instituted the modern counterpart of the older section of biology and led to the formation of the Section of Natural History in 1945. In 1933 largely through the efforts of Mr. Davis the Bird Sanctuary was reestablished in the New Springville park area and winter bird feeding has been carried out each year in this locality. In 1948 another station was set up in Buck's Hollow. Mr. Leng's personality and scholarship both in entomology and local history endeared him to many and his death in 1941 deprived Staten Island of one of its most helpful and best known citizens.

The writer was appointed Director in 1941. His first major duty was to arrange a celebration of our sixtieth anniversary which took place on November 12, 1941, with a special commemorative

pamphlet, a Museum program and a dinner and lecture by Howard H. Cleaves in the evening.

Mr. Davis, our sole surviving founder, died in 1945 and his passing made us realize how much we owe to his many years of constant attention to our affairs. His generous bequests have made it possible for us to expand our whole natural science program and his name is being remembered through our William T. Davis Memorial Lectures and the William T. Davis scholarship. The biography of Mr. Davis which is being written by Miss Mabel Abbott, should be ready for distribution this year.

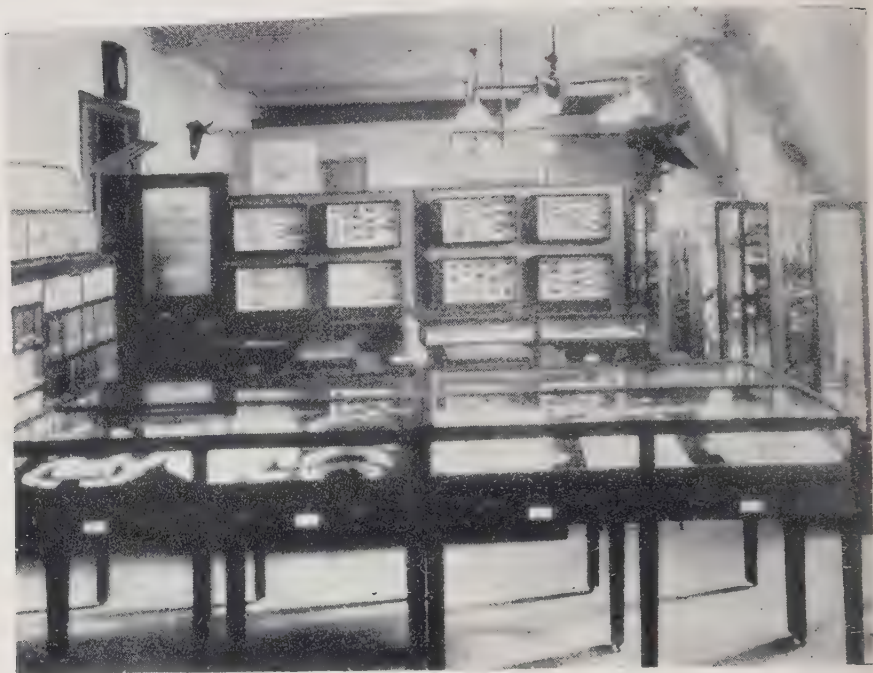
A word should be said of another consistent and generous supporter of our Institute, Dr. Nathaniel Lord Britton, one of the original members of the Natural Science Association and later the first director of the New York Botanical Garden. In addition to the Crooke Fund he also established the Nathaniel L. Britton and Gertrude Elizabeth Britton Trust. In 1915 he gave to the Association his home at the corner of New Dorp Lane and Cedar Grove Avenue to be preserved as an example of domestic colonial architecture. The original section of this old house was built about 1671 with additions about 1700, 1714 and 1790. Its history has been recorded in our *Proceedings* by Arthur Hollick in 1914 and by Loring McMillen in 1940. A Wild Plant Garden in memory of Dr. and Mrs. Britton was authorized by the Board of Trustees in 1947 under the leadership of Mr. I. C. G. Cooper and when completed it will aid considerably in preserving our fast disappearing native wild flowers as well as establishing a beautiful garden. In 1943 a corner of the plot was offered as a site for the New Dorp Beach War Memorial.

During the past few years some effort has been made to expand our educational activities and in order to do this the Museum building began to be open evenings in 1941. This permitted the development of a greatly enlarged program of classes, particularly adult courses with in-service credit for teachers.

It is with great pleasure that we were able to record at our annual meeting of May 1948, the permission of the Staten Island Savings Bank for us to use the Davis House as an adjunct of the Museum. The offices and library of the Institute were moved there during the summer. This adds a third important building now being used by the Institute and helps some to relieve the congestion all too apparent in the Museum itself.

In conclusion, however, the writer finds himself in much the same spirit as did Senator Bayne at the 25th anniversary. We have

accomplished much during our existence as recorded herein. But again we are faced with the need of a much larger museum, properly equipped with adequate exhibition halls, storage facilities, workshops and preparation rooms, classrooms and a well-equipped auditorium. Plans for such a new building have been delayed year by year in this post war period but it is to be hoped that before many years we shall find ourselves in an adequate home where we can take a deep breath without damaging some nearby exhibit. In the meantime the following summary of our accomplishments during the past 50 years will stand on its own record, testifying to the value of the Institute as a cultural force to Staten Island and the City of which we are a part: One thousand lectures or concerts of general interest; 15,000 groups, meetings or classes; 10,000 classes for children; 30 volumes of the *Museum Bulletin* and 17 of the *Proceedings* with 1000 articles on Staten Island written by Staten Island authors; 300 field trips; 200 art exhibitions, 60 exclusively for Staten Island artists; 10,000 volumes accumulated for a reference library and about 500,000 objects preserved in our collections.



THE MUSEUM IN THE BOROUGH HALL
(1907 - 1911)



(Photograph by Robert Mathewson)
"STATEN ISLAND, OLD AND NEW"
A corner of our Summer Exhibition

Staten Island, Old and New

ROSWELL S. COLES

A colorful and varied exhibition of paintings, "Staten Island, Old and New," was shown in our gallery during the summer as part of our Golden Anniversary celebration. Forty-one paintings were exhibited: 26 oils, 14 water colors, 1 gouache, as well as one pencil drawing. Eleven artists contributed: Albert Barbelle, Ernest Beaumont, Henrietta Beaumont, Cecil C. Bell, Ely M. Behar, Bernard O. Fingado, Percy Leason, Alfred McNamara, Carolyn Mase, Otto C. Wigand and Emma L. R. White.

We are indebted to the artists, as well as to Mrs. Homer F. Marshall, Mr. Robert C. Wigand, Mrs. Charles L. Kirkley, Mr. Frederick Beaumont and Mr. Raymond C. Fingado, owners of several of the paintings, whose cooperation made the exhibition possible.

Staten Island is a study of contrasts from busy street scenes to quiet woodlands and from the bustle of the East Shore docks to the quiet backwaters of the Arthur Kill and Raritan Bay. Thirteen of our paintings were of sufficient range to constitute artistic record of Staten Island places of beauty. Of these, our park lands seem to have been particularly attractive. Clove Lakes Park was represented by a colorful scene of skaters on Martlings Pond by Mrs. Beaumont, the path along Clove brook by Mr. Behar and the boathouse by Mr. Leason.

Ernest Beaumont painted many Staten Island scenes during his life, and a snow scene of the brook in Buck's Hollow, Latourette Park, added to our exhibit of Parks. Two other canvasses in a similar mood were the Champion estate on Grimes Hill and "Robin Hood," a section of the old iron mine district in the vicinity of Little Clove Road.

Mr. Leason also exhibited two other oils, one of Willowbrook Park and the other a Stapleton street scene, "Rendt's Service Station."

Mr. Wigand was represented by two large oils painted from his home on Osgood Avenue. One looked toward the south and Richmond Road, the other overlooked the Stapleton roof tops, dominated by the brewery tower.

Other scenes included a view of Sailor's Snug Harbor by Mrs. White, the railroad at Arden Avenue, Annadale, by Mr. McNamara.

mara and a large oil, "Fresh Kills Meadows in June," done in a style reminiscent of her teacher, Twachtman, by Miss Mase.

A comprehensive selection of waterfront scenes was shown. The busy North and East Shores included a view of the Kill Van Kull from Castleton Park by Miss Mase, an interesting interior of the old 69th St. Ferry House by Mr. McNamara, two large scenes of the Stapleton docks, a gouache by Mr. Bell and a water color by Mr. Beaumont, and the docks at Clifton, an earlier work by Mr. Wigand. Along the South Shore the mood was quieter, an old lighter tied up at Princes Bay, an oyster sloop along the salt marshes, and a man caulking a work boat at Tottenville, all by Mrs. Beaumont. Mr. Behar contributed a view of the boat yard at Great Kills and Mr. Fingado a tug boat at Tottenville.

The section devoted to old Staten Island houses also contributed historical as well as artistic matter. Eight of these paintings were by Mr. Beaumont: the Stillwell-Perine House, 1460 Richmond Road, built c. 1680; the Lake Tysen House on Tysen's Lane, New Dorp, called the "1700 House"; the Billopp or Conference House before its restoration; and three "Old Houses" not identified. He also painted views of the old inn at Rossville from the front and the rear.

Mr. Behar also painted the Stillwell-Perine House and "An Old House on Amboy Road" and Mrs. Beaumont the Rossville Inn and Woeckner's farm at Bull's Head. A water color of the Judge Metcalfe house at Green Ridge by Mr. McNamara concluded this section.

The village of Richmond deserved special attention. The pencil sketch by Mr. Beaumont was a general panorama of the village, to which was added a water color by him of the old tide mill formerly standing on Richmond Creek. Two water colors by Mr. Fingado, "The Treasure House" and the "Voorlezer's House" have been discussed previously in our *Museum Bulletin*. The lighthouse on Richmond Hill by Mrs. Beaumont and St. Patrick's Church by Mr. Barbelle concluded the exhibition.

Herring Gull Nests on Staten Island

HOWARD H. CLEAVES

An ornithological event of the first magnitude for Staten Island was the discovery of the nest of a herring gull (*Larus argentatus smithsonianus* Coues) June 4, 1948, on Crooke's Point, Great Kill, Staten Island, New York. The nest, containing two eggs, typically grayish olive-brown with chocolate blotches, was on the ground approximately three hundred yards east of the western extremity of the Point. The land at this place consists of recently dredged sand and fine gravel almost devoid of vegetation. The height of this made land forms a ridge or hump, its axis running east and west, the surface sloping toward the Kill to the north and to the shore of the Lower Bay to the south. The gull's nest was on the northerly slope an estimated fifty yards from the height of the hump.

The nest itself was well constructed of dead stems and roots of grass and other small plants which formed a solid lining for the depression the bird had shaped in the sand. Having seen many nests of this species in Maine, Nova Scotia, New Brunswick and Labrador, I feel qualified to state that the nest on Crooke's Point was typical, but the nest site was the most exposed I can recall having seen. The birds customarily place the nest among thick ground vegetation such as grasses, weeds, raspberry bushes and the like.

Witnesses to the discovery of the gull's nest were three members of the Ridgewood (N.J.) Audubon Society—Mrs. Norman Emig, Mrs. Richard H. Cubberley and Mrs. L. Fusser—whom I had volunteered to guide on a field trip around the island for the study of shore birds. While we were near the nest two herring gulls in adult plumage flew back and forth above us, uttering the *kuk-kuk-kuk* note of alarm which I had heard so many times on islands where the birds breed along the northern coasts.

On June 8 I revisited the site of the gull's nest in the company of George Wilmott and Willis McCullagh, making the trip in Mr. McCullagh's power boat from the pier of the Great Kill Yacht Club. The gull was in attendance at the nest and flew, complaining, above us as before, but only one bird was noted in place of two observed on the 4th of June. The nest still held only two eggs, a full clutch commonly containing three. On this visit Wilmott took Kodachrome still pictures of the nest and eggs, while I took



(Photograph by George B. Wilmott, June 8, 1948)

HOWARD H. CLEAVES AND THE HERRING GULL'S NEST
FOUND BY HIM ON CROOKE'S POINT, GREAT KILLS,
STATEN ISLAND, JUNE 4, 1948.

Kodachrome 16mm motion pictures and black-and-white still pictures for the record.

Mr. McCullagh again offered the use of his boat on Sunday, June 20th, 1948, and on this date Dr. and Mrs. James P. Chapin accompanied McCullagh and me to Crooke's Point. At a glance it was evident that the gull's nest was deserted, the eggs being cold and innumerable sand grains, splashed up by the heavy rain of Friday night, June 18th, clinging undisturbed to the nest material. No gull cackled above us. The two eggs were collected as a scientific record and, after being blown, will be deposited with the Institute's natural history material.

Fifteen paces to the northeast of the first nest the Chapins and I discovered a second herring gull's nest on this date (June 20th), but it contained only the remains of a broken egg—considerable white of egg, a small amount of yolk and a few fragments of shell.

In his *Life Histories of North American Gulls and Terns* Arthur Cleveland Bent gives the breeding range of the herring gull, in part, as "In North America east to the Atlantic coast, South to central Maine (Penobscot Bay), central New York (Lake Champlain, Hamilton, Herkimer, and Oneida Counties) . . ." But Bent's work was published in the year 1921, and it seems that from the moment a book about birds comes off the press the birds contrive to make the book appear obsolete. In the past twenty-seven years the herring gull has gradually pushed its breeding grounds southward from Penobscot Bay, Maine, along the coast, first into Massachusetts, then to Fisher's Island, N. Y., (which geographically is more akin to Connecticut or Rhode Island). Allan D. Cruickshank in his book *Birds Around New York City* (1942) states, under herring gull, "In 1936 John Helmuth found over a dozen pairs nesting on Cartwright Island, and in 1940 (LeRoy) Wilcox discovered eleven nests as far west as Fire Island Inlet, the southernmost record for the United States."

The significance of the nesting of the herring gull here recorded for Staten Island is that the nesting range of the species is extended along the coast approximately fifty miles in a southwesterly direction; that this is unquestionably the first recorded instance of the nesting of the herring gull in New York City; and that this Staten Island nest, in the absence of contrary evidence, becomes the southernmost nest of this species to have been located anywhere in the whole of North America.

Breeding Bird Count, 1948

CASIMIR F. REDJIVES

Sunday, June 6, 1948, was a favorable day for bird observation. At 6:00 A.M. this writer was awakened by the musical song of a brown thrasher whose nest was approximately fifty feet from the bedroom window. It was the first species on the day's list.

The temperature was in the seventies, little or no wind was blowing, making observations easy. After this observer left the house he did not return until late in the afternoon (only to get a sandwich) and then set forth to remain until 5:30 P.M.

The other observers who participated in the June census were: Howard H. Cleaves, Mrs. Miriam C. Stryker, Kurt Henning, Roger Christenson, Charles Pearson, Lee A. Ellison, Miss Mathilde Weingartner, Mrs. Elsie Cole, Dr. and Mrs. Joseph Kovacs.

Ninety-five species were listed for the day, most of them nesting here. The writer believes that the long count is due to the cold weather which had prevailed during the month of May so observers saw warblers that were overdue at their nesting grounds in the north country.

The list for the day follows:

Pied-billed Grebe, Wilson's Petrel, Double-crested Cormorant, American Egret, Eastern Green Heron, Black-crowned Night Heron, American Bittern, Least Bittern, Black Duck, Wood Duck, Cooper's Hawk, Sparrow Hawk, Ring-necked Pheasant, Clapper Rail, Piping Plover, Killdeer, Ruddy Turnstone, Spotted Sandpiper, Greater Yellow-legs, Knot, Least Sandpiper, Red-backed Sandpiper, Semipalmated Sandpiper, Sanderling, Great Black-backed Gull, Herring Gull, Laughing Gull, Common Tern, Roseate Tern, Least Tern, Mourning Dove, Yellow-billed Cuckoo, Black-billed Cuckoo, Barn Owl, Whip-poor-will, Chimney Swift, Hummingbird, Kingfisher, Flicker, Downy Woodpecker, Eastern Kingbird, Crested Flycatcher, Alder Flycatcher, Wood Pewee, Prairie Horned Lark, Tree Swallow, Rough-winged Swallow, Barn Swallow, Bluejay, Crow, Fish Crow, White-breasted Nuthatch, House Wren, Long-billed Marsh Wren, Catbird, Brown Thrasher, Robin, Wood Thrush, Veery Thrush, Bluebird, Starling, White-eyed Vireo, Red-eyed Vireo, Warbling Vireo, Black and White Warbler, Yellow Warbler, Magnolia Warbler, Blackburnian

Warbler, Black-poll Warbler, Prairie Warbler, Ovenbird, Northern Yellow-throat, Yellow-breasted Chat, Redstart, English Sparrow, Eastern Meadow Lark, Red-winged Blackbird, Baltimore Oriole, Purple Grackle, Cowbird, Scarlet Tanager, Cardinal, Rose-breasted Grosbeak, Indigo Bunting, Goldfinch, Towhee, Sharp-tailed Sparrow, Seaside Sparrow, Field Sparrow, Swamp Sparrow, Song Sparrow, Phoebe.

Actual nests of the Black Duck, Phoebe, Rough-winged Swallow, White-breasted Nuthatch, Catbird, Brown Thrasher were observed by this writer.

The Black Duck's nest when first discovered contained eight eggs; upon later visits five of the eggs had disappeared; whether gulls or predatory animals were the culprits is unknown. The American Bittern's nest was discovered before the census. It contained four eggs. When this writer visited the nest for the last time, the young bitterns were large enough to scramble out of the nest and hide in the cattail rushes.

After the census this writer visited the pond where the Pied-billed Grebes were seen and waiting patiently for an hour, he was rewarded by seeing the mother grebe with four zebra-striped young. On a return visit to the same pond on July 11, this writer missed the Grebe family but in its stead were four young Least Bitterns. It was interesting to watch the parents vigorously feeding the young birds with food gathered among the tall phragmites.

The outstanding find for the day was the nest of the Herring Gull on Crooke's Point by Mr. Howard Cleaves. This discovery has been reported above.

Carolyn Campbell Mase

EMMA L. R. WHITE

One of Staten Island's noted artists, Miss Carolyn C. Mase, who died on July 23rd, 1948, will be greatly missed by her many friends and those who could claim only an acquaintance through her presence at the various art exhibits, which were held at the Museum.

Miss Mase was born at Matteawan, now Beacon, Dutchess County, New York, where she lived for a number of years before coming to Staten Island in the 1890's. At that time she studied with John H. Twachtman in his preparatory antique class at the New York Art Student's League for about two years and was a faithful member of his summer school at Cos Cob, Connecticut, where she gained her major instruction in landscape painting. She became acquainted there with J. Alden Wier, Childe Hassam and Theodore Robinson, who, with Twachtman made up the group of famous impressionists in this country. Some time later she studied at the Sorbonne in Paris.

Art was not Miss Mase's only interest. She was a member of the Melzingah Chapter of the Daughters of the American Revolution and the Staten Island branch of the Seamen's Institute. Throughout her lifetime she kept up with world affairs to an unusual extent inspired largely by her father, the Hon. Willard H. Mase, member of the New York Assembly for many years. She was an enthusiastic champion of Woman Suffrage, and during World War I moved to Washington, D. C. and became a Liberty Bond saleswoman. At one period she wrote for magazines, and an article of hers on John H. Twachtman appeared in *The Studio*.

A member of several art societies, she exhibited in the following: The Water Color Club, Washington, D. C., New York Water Color Club, American Water Color Society, The Brooklyn Museum, Pennsylvania Academy of Fine Arts, National Association of Women Painters and Sculptors (since named the National Association of Women Artists), and in galleries in Hartford, Utica, and many other places. On Staten Island her work was shown in libraries, schools and rotary exhibits.

Although much of Miss Mase's work was related to Richmond Borough and the waters surrounding it, she travelled to Cape Cod and other seaside spots to paint and give variety to her subjects. She was an early member of the Museum's Art Committee and

its chairman for five years, always working diligently to make the exhibitions a success. Also, she was one of the founders of the Staten Island Art Association established in 1935. A one-man show was held in the Museum's Galleries in 1929. Two of her works are now displayed there in conjunction with the Golden Jubilee exhibition. To mention but a few of her paintings, they are: "Fresh Kills Meadows in June," "Dream City," a glimpse of Manhattan's skyscrapers as seen from the Island, "Kill Van Kull," showing Standard Oil chimneys, and "When Greek meets Greek," a sea painting with violent surf beating against rocks.

Miss Mase had a fine color sense and always painted in a high key, seeing things bathed in the full beauty of sunlight. Impressionism was at its height when she first studied, and the dark old Hudson River School was left behind. However, at the turn of the century, Impressionism began to decline, but it did not fall in the opinion of Miss Mase, for she was a devotee of this phase of art to the end of her life. She often said, "I stand for beauty and aristocracy in nature." Her friends claim that this beauty which she sought was reflected in her paintings.

The Annual Art Exhibition

JEAN LEASON

A reception to open the Annual Exhibition by Members of the Section of Art will be held on October the 17th at 3:30 P.M. This year forty-six artists are represented by sixty-seven paintings and three pieces of sculpture. Oil, water-color and pencil are the mediums used and a variety in the subject matter is seen in a number of landscapes which were done by our members on their vacations. The Executive Committee of the Art Section acted as the jury of selection for this exhibition.

Albert Barbelle, "Prayer," "Dance Fantasie;" Henrietta Beaumont, "Old Wharves & Bearskin Neck, Rockport, Mass.," "Martinicus Island;" Ely M. Behar, "Ann Schaff," "Landscape;" Cecil C. Bell, "Brooklyn Bridge;" Leslie D. Bissell, "East Boothbay Harbor;" Elizabeth A. Blake, "Autumn Memory;" Janet Bruns, "Copper & China," "Summer in Jersey;" F. A. Busing, "Vapor Rising," "Choppy Channel;" Alice Canady, "Mrs. Theodore Shoglund;" Lawrence Cianchetta, "Beached;" Artemis Darson, "Roses;" Ethel Easley, "Judy;" Elinore Fichtmuller, two pieces of sculpture, "Head" and "Figure;" Ferdinand O. Fingado, "Old Tide Mill at Richmond;" Helen Friedman, "Disosway Homestead;" Lola Landry Gerow, "The Old Philosopher," "Mrs. Thomas E. Dewey;" Lillian W. Gilfillan, "Turbulence," "Chrysanthemums;" Hans Glinicke, "Shadow on Canvas," "On the Mantel;" Samilla J. Heinzmann, "The Angel's Garden," "The Robert Johnson Pink Magnolia."

Mary T. Howe, "The Chicken Yard;" Mabel Wellington Jack, sculpture, "Madonna;" William Johnston, "Reflection," "Babs;" Stanley Jorgensen, "The Kills," "Steam, Storm & Soot;" John Koestner, "Coconut Palms at Miami, Florida;" Etta Konovitz, "Lincoln in Bronze;" Valeria Korniloff, "The Old Chicken Coop;" "Zainka;" Isabel Leason, "Tiger Lillies," "Mexicana;" Jean Leason, "Adirondack Road," "Summer Bouquet;" Percy Leason, "Interior," "Summer Midday in the Adirondacks;" Alfred McNamara, "High Street, Block Island," "Rainy Day;" Eleanor Marshall, "Summer Scene," "Brook Haven Creek;" Ramona C. Michener, "The End of a Peaceful Day;" Elizabeth L. Nugent, "Travis Farm," "Gladiola;" Joseph Nugent, "Still Life;" M. B. Radding, "Still Life;" Frank Ray, "Daisy Rhythm," "Wedgewood Setting;"



(Photograph by Robert Mathewson)

"STEAM, STORM AND SOOT"

Watercolor by Stanley Jorgensen

Catherine Rodriguez, "Peonies;" Margaret Rue, "Lilacs," "Daffodils;" Libbie Segman, "Still Life;" Juan E. Schlatter, "USCG Training Ship, Danmark;" Seymour Sherman, "Blue & Gold," "Reclining Statue;" Isabel Grinnell Simons, "The Old Gravel Pit;" Ester Dahl Tellefsen, "Flower Arrangement," "Tranquility;" Julie Von Bevern, "Staten Island Beach;" Frederick Whitaker, "The Challenger," "Trappings of Trade;" Theodora Wilbur, "Marjorie."

Institute Notes

The Institute Calendar will be mailed to reach members by the first of each month but we plan to note here a few events of special interest.

Open House Day. Special exhibits and program to commemorate the Golden Anniversary of the City of New York. Opening of the Annual Exhibition of work by artist members of the Institute. Sunday, October 17, 2:30—6 P.M. at the Museum.

President's Reception and Tea. Mrs. Anselm M. Nascher, President of the Woman's Auxiliary, will entertain members of the Auxiliary and guests in the Museum on Wednesday, October 27 at 2 P.M.

Artists' Carnival. This annual evening of fun and color will be held on Saturday, November 6, at Svea Hall, Port Richmond.

William T. Davis Memorial Lecture. Frank Gunnell will present his colored motion pictures, "Timberline Trails," at McKee High School, Saturday, November 20 at 8:15 P.M.

Christmas Music. The annual Christmas concert of choral and instrumental music and community Christmas carols will be held in McKee High School, Saturday, December 18, at 8:15 P.M.

A Commemorative Exhibition. The work of Fred W. Kost (1861-1923), a painter well known to Staten Islanders, will be shown during November and December.

Airplane Exhibit. Adults as well as young people will enjoy the special airplane exhibit arranged by Mr. Mathewson. Training in the Link Trainer will be given daily from 4 to 5 and 7 to 9 P.M. as well as all day on Saturdays.

Staten Island Indians. Mr. Elliott Burgher's fine collection of Staten Island Indian artifacts will be on exhibit during the winter months.

Photographic Exhibits. The Staten Island Camera Club will continue to keep the walls of the Museum auditorium filled with examples of the best in salon photography.

Membership

We welcome the following new members of the Institute: Louis P. Agoliati, Miss Louise M. Baumann, Andrew J. Blue, Thomas J. Bothwell, Harry D. Bourne, Miss Janet L. Bruns, Max De Lasse, W. R. Flader, Miss Lillian W. Gilfillan, Herman Gluck, Edgar C. Hasson, Mrs. Walter Heap, Miss Dorothy Hegewish, Mrs. Eleanor Hendry, Robert H. Hoffman, Mrs. Edna Holden, Mrs. H. R. Hunt, Mrs. Mabel W. Jack, Stanley Jorgensen, Andrew Magliacca, John Matejcek, Mrs. Esther Mathiesen, Mr. and Mrs. Eduard C. Meurer, W. N. Meyer, James Murphy, Mrs. Fred Nellis, James R. O'Brien, Mrs. Sylvia Pederson, Ted Shoemaker, Dr. Seymour Sherman, Dr. R. B. Stephenson, Russell W. Stiles, Lloyd W. Stuart, Fred G. Wuest, Mrs. Elizabeth Cawley, Herbert Curl, Jr., Miss Louise Kreischer.

THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES

DIRECTORY, 1948-1949

The Staten Island Institute of Arts and Sciences is incorporated under the laws of the State of New York for the purpose of promoting an interest in the arts, sciences and history, particularly as they relate to Staten Island. It does this through a wide range of activities as listed below, and by maintaining a Museum at 75 Stuyvesant Place, and Office and Library in the Davis House at 146 Stuyvesant Place and the Britton Cottage at New Dorp. The City of New York contributes annually toward the cost of maintaining the Museum.

Membership in the Institute consists of two classifications: (1) Group membership: (a) Sections, formed by five or more members to carry out some particular branch of study; (b) Affiliated Societies; and (2) Individual Membership: Patron \$1,000.00, Life Member \$100.00, Annual Member \$3.00. Anyone interested in helping carry out the purposes of the Institute is invited to become a member.

Officers

President, Dr. James P. Chapin	2nd Vice-President Mrs. A. W. Hoffmeyer
1st Vice-President, Dr. Frank A. Strauss	Treasurer, Robert M. Leng
Secretary and Director, Roswell S. Coles	

THE WOMAN'S AUXILIARY

The Woman's Auxiliary was organized in 1919 to support the interests of the Institute in all its activities. Any woman interested in the object of the Auxiliary is eligible for membership. Meetings are held the last Wednesday in each month, October to May inclusive, in the Museum. The October meeting consists of a President's Reception in the afternoon, other meetings are at 10:30 A.M. They consist of a short business meeting followed by an interesting program. Annual dues are \$1.00 payable April 1.

President, Mrs. Anselm Nascher, 204 Utter Ave., S. I. 14

THE INSTITUTE COUNCIL

The Institute Council was formed in 1942 to coordinate group activities and plan Institute programs. Each Section and Affiliated Society is represented by two delegates and meetings are held twice a year.

President, W. N. Meyer, 42 Allendale Road, S. I. 5

SECTIONS

Section of Art

Purpose: To foster the progress of Art on Staten Island.

Membership: Membership is open to anyone expressing an interest in the objects of the Section. Exhibiting members are selected on the basis of their work.

Activities: Two annual exhibitions for which members may submit work, special exhibitions. Annual Artists Carnival, Life Class, Oil Painting Class, Sculpture, Jewelry Making and Sketching Groups.

Dues: Annual \$3 membership in the S. I. Institute of Arts and Sciences.

President: Percy A. Leason, 344 Van Duzer St., S. I. 4

Section of Literature — The Belles Lettres Society

Purpose: To foster appreciation of, and to encourage literature and other fine arts among its members, and in the community.

Membership: Active members shall be residents of Staten Island who have shown definite interest in literature and other Fine Arts.

Meetings: Monthly from September through June on third Sunday afternoons at member's homes. Members may bring guests.

Dues: Two dollars per annum.

President: Isidore Delson, 324 Castleton Ave., S. I. 1

Section of Microscopy — S.I. Microscopical Society

Purpose: To hold an Annual Microscopical Exhibition in co-operation with the Staten Island Institute of Arts and Sciences and by means of monthly meetings provide opportunities for adult workers in the natural and physical sciences to get together and exchange experiences. The Society is conducting an intensive study of the serpentine rock of Staten Island and the relation of plant and animal life thereto.

Membership: Open to those who are members of the Institute and who use the microscope in their scientific studies or occupation.

Meetings: First Wednesday evening of each month from October through May.

Dues: Annual \$3 membership in the S. I. Institute of Arts and Sciences.

President: Joseph F. Burke, 25 Curtis Place, S. I. 1

Section of Music — Staten Island Oratorio Society

Purpose: To study and present Oratorios and other choral music and to promote good music on Staten Island.

Membership: Active and Associate.

Meetings: Weekly on Monday evenings at the Museum.

ACTIVE: \$10.00 per year, in four equal instalments.

ASSOCIATE: \$5.00 per year, due in September, entitles member to two tickets for each concert.

President: W. N. Meyer, 42 Allendale Road, S. I. 5

Section of Natural History

Purpose: To encourage and promote an interest in Natural History, particularly in regard to Staten Island and the immediate vicinity. To promote organized outdoor and indoor meetings for the study and recording of Staten Island Natural History.

Membership: Membership is open to any member of the Institute expressing an interest in the study of the Section.

Activities: Field trips and outings, bird walks, nature study groups and special programs.

Dues: Annual \$3 membership in the S. I. Institute of Arts and Sciences.

President: Edwin Rundlett, 1 Fairview Ave., S. I. 14

Section of Photography — S. I. Camera Club

Purpose: To further the knowledge and practices of pictorial photography; to foster exhibitions, lectures, demonstrations and courses in photography; to promote the interests of amateur photography; to encourage the values of other branches of amateur photography as a hobby; and to join with and/or associate with other clubs, organizations, societies and efforts fostering amateur photographic activities.

Membership: Open to anyone expressing an interest in the objects of the Club. Regular members must be over 16 years; Junior Section members, anyone over 14 years attending public school.

Meetings: Every Wednesday evening 8:30 P.M. from September through June in the Museum follows: 1st Wednesday, Business meeting; 2nd Wednesday, lecture; 3rd Wednesday, Color S and or motion picture competition; 4th Wednesday, Print competition. Junior Section meets Saturday afternoon 2:00 P.M.

Dues: Annual dues \$4.00 which includes membership in the S. I. Institute of Arts and Sciences. Junior Section membership annual dues \$1.00.

President: Thomas J. Fisher, 271 Bement Ave., S. I. 10

AFFILIATED SOCIETIES

The Fortnightly Club

Purpose: The object of the Club is intellectual culture and entertainment.

Membership: Names proposed by members are referred to the Executive Board for canvass of Club before being voted upon. Members shall give an original paper every alternate year.

Meetings: Fortnightly, Mondays, except when special holidays intervene, at the homes of members.

Dues: Two dollars per year.

President: Mrs. Thomas Dobson, 758 Tompkins Ave., S. I. 5

The Philatelic Society

Purpose: To assist its members in acquiring knowledge in regard to philately, to cultivate a feeling of friendship among philatelists and enable them to associate with members of similar societies and, in furtherance of these objects, to assist its members in acquiring and disposing of stamps of various kinds.

Membership: Any person of good character above the age of 21 years interested in philately may become a member of the Staten Island Philatelic Society. There shall also be eligible for Junior membership persons of good moral character interested in Philately below the age of 21 years.

Meetings: The second and fourth Monday evening of each month from September through June in the Museum.

Dues: Initiation Fees \$1.00; Dues \$1.00 per annum.

President: Robert E. Porter, Jr., 51 Larch Road, S. I. 4

Richmond County Chapter

N. Y. State Society of Professional Engineers

Purpose: To preserve the traditions and advance the ideals of the engineering profession, to uphold its dignity and enhance its honor, to raise the standards of preparation for its practice, and to extend its sphere of influence in and of service to society.

Membership: Only Licensed Professional Engineers and Land Surveyors of the State of New York may apply for membership.

Meetings: The first Wednesday of each month from September through June, at the Museum.

Dues: Annual dues are \$20.00 which includes membership in the National and State Societies of Professional Engineers and the local chapter. In the case of Land Surveyors annual dues are \$13.00 as they are not included in the National Society.

President: Frederick Mardus, 57 Radcliff Road, S. I. 5

Treble Choral Ensemble

Purpose: To promote the love of group singing through participation and the study of the literature in choral literature for women's voices. To aid worthwhile community projects through projects of concerts.

Membership: Basic knowledge of the rudiments of music. Voices are chosen on the basis of quality and the ability to blend with other voices of the ensemble. Interest and love of good music is another requirement.

Meetings: Every Tuesday evening from September 21 through May in the Museum.

Dues: \$10.00 a year payable in two installments in September and January. Cost of music is included in this fee.

President: Mrs. William Phillips, 344 Rose Ave., S. I. 6

PROCEEDINGS of the
STATEN ISLAND INSTITUTE
of ARTS and SCIENCES



VOLUME XI

NUMBER 2

January, 1949



(Photograph by Herman Guether)

OLD KREISCHERVILLE, 1907

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Kreischerville: A Forgotten Chapter in Staten Island History

MABEL ABBOTT

The driver of the Arthur Kill bus had never heard of "Kreischerville." "Charleston," we amended. "Oh, sure!" he agreed, and stopped where Winant Place goes down a gentle slope past a little, white-spired church to the Kill.

Kreischerville, during almost the whole latter half of last century and well into the present one, was the site of a large and important industry; and a self-contained, busy, crowded and colorful little community was created there which was entirely unlike any other on the Island. Yet the very name of the place has been lost except in books and in the memories of a few old-timers or their descendants.

The main outline of the industry has been briefly recorded in various publications. Miss Louise Kreischer of Manhattan, daughter of George F. and grand-daughter of Balthasar Kreischer, has now presented to the Staten Island Institute of Arts and Sciences a fine collection of family and business papers, portraits and objects, and this, with some little additional research, makes it possible to add considerably to the record, and to re-create to some extent the place and the period.

Because of its geologic interest, this part of the Island was the scene of some study by the Natural Science Association of Staten Island, (predecessor of the Staten Island Institute of Arts and Sciences); and the late Dr. N. L. Britton, Dr. Arthur Hollick and W. T. Davis made numerous field trips there, found amber, fossil leaves, etc., and published their findings. The clay, of course, had been discovered and the industry established fifty years before that. It might be said, indeed, that the story of the fire-brick factory at Kreischerville began millions of years ago, in the Cretaceous period of the world's geologic history, when great clay deposits were formed in New Jersey and extending across the Arthur Kill

PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES, Vol. 11, No. 2, January, 1949. Published quarterly in October, January, April and July, by the Staten Island Institute of Arts and Sciences, 75 Stuyvesant Place, Staten Island, N. Y., and entered as second class matter at Staten Island, N. Y., under act of August 24, 1912. Mabel Abbott, Editor.

into Staten Island. But to get down to the time when the age-old clay was dug out, worked, burned and made into structures for human use, the story begins with the arrival in this country, in 1836, of Balthasar Kreischer, a young builder, from Hornbach, Bavaria.

Balthasar Kreischer was a descendant of a family which, according to genealogists, can be traced back to the time of the First Crusade, in which four of its members took part. The coat of arms bears the pilgrim scallop-shells, and the name was then "Croisier,"—"cross-bearer." The family lived in Styria, but about the seventh century religious persecution sent it to Switzerland, and some centuries later it went to Germany. At some early period the name, by the usual phonetic process, became Kreischer.

Miss Louise Kreischer has made a copy of a statement written by her grandfather, from which copy the following is quoted:

"My grandfather, Nicholas Kreischer, was born in Bernschweiler Trier, in Rhenish Prussia, of Swiss ancestry. He came to Hornbach, Bavaria, in 1720. He married and had three sons and one daughter. After his passing, his son Balthasar took his building business. This Balthasar, my father, was born November 24, 1776. He had two sons and four daughters, and passed away in 1835."

Balthasar Kreischer the second, (founder of Kreischerville), was born in Hornbach March 13, 1813. Until he was twenty-one he worked with his father. It was a family of builders, and in those days builders knew something about everything connected with building. The boy learned to make fire-brick, knew something of stone-cutting, and became more or less of an architect, being able to draw plans for buildings, as well as erect them. He had a taste for music, too, and learned to play the flute. In 1834 he was sent to London to study with the sculptor Classing. While there he carved in marble a life-sized figure of Christ on the Cross, which later marked his mother's grave. It was then the custom to reward exceptional students by public recognition, and proof that young Kreischer was exceptional is found in the fact that he, with two others, was chosen to lay the foundation and the cornerstone of the fortress of Germersheim.

This energetic and versatile young man saw the opportunity created by the great fire in New York December 16, 1835, which

burned 700 buildings and laid waste seventeen blocks of the city. Quoting again from the copy of his own statement:

"I landed June 4, 1836, on Staten Island, my present home, to help rebuild the burned city."

That he should have touched American soil first on this Island is an interesting detail which apparently had not been known until now. His statement does not explain the reason, and his granddaughter does not know it. However, Staten Island was the first point of contact of a large part of the immigration of that period, and it is a reasonable guess that this was how it happened. Most of the arrivals remained on the Island only long enough to go through the Quarantine routine, and this may very likely have been the case with Mr. Kreischer, as we find him almost immediately in New York City, and at work as a builder of both dwellings and business structures. He specialized in bakers' fire-brick ovens and was known as the best in the city in that line.

On June 29, 1837, he married Caroline Haenchen, also of Hornbach. His wife was of a French family which had fled from France after the revocation of the Edict of Nantes. Some family papers give the name as Ducoq, but Miss Kreischer has always heard it as Lecoq. In either case, it became translated into Haenchen.

Up to this time fire-brick had been imported from England, and it took a long time to get it. Here was another opportunity for young Kreischer. "In 1845," his statement reads, "I entered into business with Charles Mumpeton and laid the foundation of the present fire-brick business. * * * We were so lucky in this manufacture that in a short time we had our bricks on the market, besides gas retorts and blocks. In making contracts we had the preference over all other firms."

The clay they used came from New Jersey, near Woodbridge, and their factory was at Goerck and Delancey Streets in New York.

There was undoubtedly a good reason why they "had the preference." It is related that on one occasion Kreischer built for a customer a furnace half of imported brick and half of his own, and gave a bond of indemnity against loss in case his brick gave out before the imported article. His half of the furnace justified the confidence he had placed in it. It is said that within a few

years English brick had been almost entirely superseded by the local product.

Mumpeton died in 1849, and Kreischer took over the entire business, and the land at Woodbridge. The city factory had already spread over thirteen lots.

"In 1853," says Mr. Kreischer's statement, "I discovered Fire Clay on Staten Island Sound. This was the beginning of the present factory and future home."

Albert Killmeyer, who now lives at 4553 Arthur Kill Road, Charleston, remembers being told by his father, Nicholas Killmeyer, who was at first employed by Mr. Kreischer in New Jersey, that he told his employer he believed there was clay on Staten Island, across the Kill, and that Mr. Kreischer replied: "You go and find out," whereupon he made the borings and Kreischer bought the land. These two versions are not necessarily contradictory. The clay was discovered for Kreischer, at any rate. His own keenness in finding and acquiring the clay-land so impressed those who knew him that it has descended to the present day in a legend: "He used to go round with his cane and stick it in the ground and pull it up and smell it, and if he smelled clay he bought the land!"

Among the Kreischer papers now in possession of the Institute of Arts and Sciences is a certified copy of a deed made May 4, 1854, by "William Depue of the Town of Westfield, Richmond County and State of New York, and Elizabeth E., his wife," to "Balthazer Kriescher, [sic] of the Town County and State aforesaid," for one acre of land. The grantor's name is spelled "Depew" in the last paragraph. If this was not the first purchase made by Mr. Kreischer on Staten Island, it must have been one of the very earliest. Its wording is interesting, too, as showing that he gave the Island as his residence, and indicating that from the first he intended to establish not only his industry but his home here. The description of the land is:

"All that certain piece or parcel of land situate lying and being in the Town of Westfield aforesaid and adjoining the west side of the public road leading from Rossville to Tottens (Dock) Mills now Weirs Mills: Beginning at the southeast corner of the land of John Androvatt by said road and running from thence north seventy-two degrees and a half west five chains and thirteen

links, thence south nine degrees west two chains and twenty-five links, thence south seventy-six degrees east five chains and thirteen (links) thence north nine degrees west one chain, thence north twenty degrees east ninety-four links to the place of beginning. Containing one acre of land strict measure bounded northerly by land of John Androvatt westerly and southerly by land of Lewis Androvatt and easterly by the aforesaid public road."

At various times and in various localities Mr. Kreischer bought a great deal of land on the Island; but this particular deed is for land in the farming region which was then usually known as Androvetteville, but had also been called Charlestown. The northern part of the region was often known as Chestnut Hill, and just south of Androvetteville was Allentown or Van Allentown.

"In 1855 the Factory was built," wrote Mr. Kreischer, referring to the works on the Island, "and I built sloops, schooners and propellers. In 1858 the factory for Gas Retorts was started, about $1\frac{1}{2}$ acres of land and 200-250 men employed."

A booklet entitled: "Prominent Men of Staten Island, 1893," says that the manufacture of gas retorts is "an invention especially due Mr. Kreischer." Bayles' History of Richmond County asserts that Staten Island was the first place in America where gas retorts were manufactured. This last claim can hardly be literally correct, since Kreischer's own statement as to the partnership with Mumpeton says—"besides gas retorts and blocks;"—and that was in New York. At any rate, all records indicate that an outstanding characteristic of Mr. Kreischer was his awareness of new things in his industry and his disposition to be abreast of them. Some records say that the clay-digging machine which he installed later was the first in America. Another characteristic was a policy of expanding to keep up with opportunities. In 1865 he purchased more clay-beds at Woodbridge, and also in Chester, Pennsylvania, and he had at one time a flourishing factory in or near Philadelphia. And he did not abandon the factory in New York City when he first built on Staten Island; on the contrary, the city factory continued to grow at such a rate that the value of the city real estate which it covered became a serious consideration.

The "200-250 men employed" on the Island of course created a major housing problem. The farmhouses of the Androvettes and others, (some of whom had been settled in that part of the Island

for more than a century) had no relation to the needs of an industrial population. According to Killmeyer, Mr. Kreischer solved this problem by erecting, close beside the factory, sixteen two-family dwellings, a brick tenement housing twenty-four families, and another structure for six families.

Also he built for himself, on a large tract running back over the hill, a twenty-six-room house. Architecturally it was much like a number of large Staten Island houses of the period—square, with a cupola. The cupola feature is supposed to have been popular with oyster captains who wanted a lookout on top of their homes, from which they could watch their fleets come in. Miss Kreischer thinks her grandfather had a water-tank in his, but it seems also to have been used as a lookout. From it he could see the plant, and in the other direction, if the day was clear, the rising towers of Manhattan. It was reached by a little spiral staircase. Sculptured marble mantelpieces were imported by Kreischer from Germany for the mansion, which was really the show-place of the section.

Killmeyer remembers that there was a stable full of horses, a coachman, and "people always coming and going." There was also a farmer and a farm-house, an ice-house with storage space above it, and many fine fruit trees. Great baskets of fruit stood about the place, and anyone might help himself; but woe to the unauthorized youth caught wandering about the premises. Many ornamental trees and shrubs were brought from Europe, and the garden was laid out in beds in the shape of diamonds, crosses, anchors and the like, each as perfect as part of a tapestry pattern and brilliant with whatever flowers were in season.

Below this estate, and stretching from the Arthur Kill Road to the shore, lay the plant, with its spreading buildings and enormous chimneys; and beside it the village. The two-family houses were square, wooden, flat-roofed affairs, each almost a perfect cube in shape. Some of them rented for as little as \$6 per family. Several of the farm-houses also remained; and according to an account written in 1936, Kreischer would advance the money if an employe wished to buy a home for himself and take it out of his wages. He had himself become an American citizen in 1840, and he urged his employees, most of whom were Germans, to do likewise. Old-timers say there was a good tight fence around the



(Photograph by Martin Hirsch, Karlsbad)

BALTHASAR KREISCHER

(Gift of Miss Louise Kreischer)

entire village, and that the gates were closed early in the evening. Miss Kreischer thinks that at one period there were some 400 workmen in the plant, and Killmeyer estimates that there were possibly 1,000 people in the village at its peak. Not all the employees had their homes there, however; some came from Rossville, Woodrow, Tottenville, and all over that part of the Island. The place became known as Kreischerville soon after it sprang up, and in 1863 a postoffice was established under that name. Nicholas Killmeyer was the first postmaster. He also owned a grocery and hotel in the village. Some thirteen years later the postoffice was discontinued, but it was re-established in 1886 and Nicholas Killmeyer's son Albert then became postmaster.

Mr. Kreischer is said to have been one of the originators of the Staten Island Railroad. The first train ran in 1860. He is credited with having given financial aid which presently made the road self-sustaining. The booklet "Prominent Men" above referred to,

says he was for a time president of the company. A list of stockholders, officers and directors found among the papers of the late John C. Thompson, undated but believed to have been printed about 1868, shows Jacob H. Vanderbilt as president and B. Kreischer as vice-president. Miss Kreischer remembers the family story that in the early days of the railroad the trains rambled gently through the countryside, picking up passengers who simply handed their fares to the conductor. The railroad was losing money at that time. "My grandfather had plenty of bricks," she says, "and so they built little brick stations at every stop and sold tickets. The farmers thought that was terrible—so much red tape! But the road began to make money from that time."

Mr. Kreischer had three sons, George F., Charles C. and Edward B. and four daughters, Fredericka, Caroline, Louise and Catherine. His wife died in 1852, and he married again, Matilda Zumberger. The children, after their early education in this country, were sent abroad to school, and the boys were later given special training to fit them for their father's business. Staten Island was the family residence for the greater part of the year, though for a few months in the winter they lived in the city at 51 Irving Place.

There were several changes in the name of the Kreischer firm at first, as Mr. Kreischer had for a short time a nephew in partnership, and then a son-in-law; but in 1870 his son George F. (born March 6, 1846, in New York City), joined him and the firm became B. Kreischer and Son. Later, the two other sons were taken into the firm and it became B. Kreischer & Sons.

George F. Kreischer married, in 1871, Miss Clara Hoff of Reading, Pennsylvania, and they had their home in New York; but his brothers Charles and Edward, who married sisters, the Misses Antoinette and Frida Wanier, built homes for themselves on the Island—two large frame houses which stood just above the Arthur Kill Road, nearer the plant than their father's home.

By 1870 the factory in New York City covered twenty-one city lots—property too valuable for manufacturing use; so Mr. Kreischer enlarged the Staten Island plant and in 1876 moved the entire equipment to the Island. The business offices were retained at the foot of Houston Street on the East River, with the storage yard, but the entire operation otherwise was carried on on the

Island. Industry and village were a closely knit and thoroughly organized single entity—a little principality, lying literally under the eyes of the founder and his sons.

Hardly had the establishment been transferred from New York to the Island when, on New Year's Eve, 1877, the plant was destroyed by fire; but by April 23 the engines were running again, operations were resumed and the plant was quickly rebuilt.

A year later, in 1878, Balthasar Kreischer retired and his sons continued the business. Albert Killmeyer, who is one of the few men still living who can remember him, says, however, that he was often in and about the plant, keeping an eye on things. In 1883 he built and presented to the village a little church on Winant Place, with money to support it. This was St. Peter's German Evangelical Church—"the St. Peterskirche" as the congregation called it, white-painted, with a spire that was conspicuous in the neighborhood, if less so than the factory chimneys. It was furnished with an unusually good organ, and the pews and wainscoting were carved. In the body of the church the pews for the congregation ran crosswise, but at the two sides of the altar they ran lengthwise, and here on one side sat the choir and on the other the Kreischer family. The church was formally presented by Mr. Kreischer on July 1, 1883. On the tenth anniversary of that occasion the congregation issued a little paper, printed in German, which described the ceremonies as follows:

"The solemn moment had come. A gray-haired man of seventy with a noble character, arose and turned the church over to the congregation. * * * With heartfelt thanks the gift of Father Kreischer was accepted, and Dr. Leopold Mohn replied in the name of the congregation. Father Kreischer then said that he was extremely happy that he had lived to see this day of consecration, and closed with the words: 'May this House of God be a blessing to all of you.'"

For the historical record, a little about the church and its congregation may properly be made a part of this story. The Rev. Jacob Ganss, a theological student who through the recommendation of Dr. Mohn had preached his first sermon in Kreischerville on the first Sunday in Advent, 1882, and had been ordained June 18, 1883, was installed as pastor of the new church. At that period

he often preached three times on a Sunday—in the morning at Kreischerville, in the afternoon at Bergen, New Jersey, and in the evening at Hoboken.

The anniversary publication lists the officers of the various church societies in 1893, thus giving us some names of Kreischer-ville residents at that date, ten years after the church was built. Women's Society: Mrs. Minna Ahrens, Chairman; Mrs. Lizzie Clarius, vice chairman; Mrs. Lily Ganss, secretary; Mrs. Katherine Lorenz, treasurer. Society for the Support of the Poor: E. B. Kreischer, Honorary President; Louis Ganss, President; Albert Reichert, Vice President; Pastor Jacob Ganss, Chaplain; Val. Meisch, Treasurer; Herman Gentz, Recording Secretary; Gottlieb Maurer, overseer; Karl Zaug, door guard. Young People's Society: Josie Eckert, President (with Gottlieb Maurer also as President); Bertha Reichert, Vice President; Emil Schaefer, Secretary; and Minnie Murafski, Treasurer.

The extent of the family's real estate interests in the Island is indicated by a tax receipt of 1896, which was for taxes on "24 houses, 71 acres." The industry had become one of the largest of its kind in the United States. The New York State Museum, in its Bulletin No. 35, Vol. 7, June, 1900, "Clays of New York," gave much space to its technical processes and to pictures of the clay-banks, the plant, and the products. The firm had gone into the manufacture of terra cotta, and made architectural decorations for some of the important buildings in the city, among them Barnard College and St. Luke's Hospital. One of the vases made for Barnard (an extra, in case of need) and three duplicates, are at present in the grounds of Albert Killmeyer. The grounds of the Kreischer homes were enlivened by statuary and figures of animals, which are well remembered by those who traveled the Arthur Kill Road not so many years ago. Experiments were also made in the manufacture of fine porcelain, and experts were imported from abroad to handle it. Miss Kreischer possesses several beautiful pieces; but the Staten Island clay proved to have iron in it which made it unsuitable for such work, and the attempt was given up.

Balthasar Kreischer died August 25, 1886. Funeral services were held in the little St. Peterskirche, and the coffin was carried out between two lines of villagers, weeping and lamenting in Old World fashion. He was buried in Greenwood Cemetery, Brooklyn.

So long and so completely had he been the central force in both business and village, even after his retirement, that his passing was felt there as the end of an epoch. A girl of the younger generation who had grown up in the village said long afterward: "I really thought the world would come to an end."

However, the world did not come to an end. George F. Kreischer and his brothers continued to operate the industry. He took out patents for various improvements, and built some additions to the plant. He continued his father's interest in the railroad, remaining a substantial shareholder and a director in the Rapid Transit Company, which succeeded the old road; and he also interested himself in the Island's politics and was a member of several organizations. For a short time his son, John B. Kreischer, also was in the partnership, thus giving the third generation representation in the firm.

Again in 1892, the plant burned down, and again it was rebuilt and operating in a remarkably short time.

In 1899 George F. Kreischer retired and the business passed out of the family, but it was carried on by new owners under the old firm name. During World War I, when place-names of German origin were being wiped out right and left, "Kreischerville" suffered the same fate and the earlier name of the village was restored. It is said to have been originally "Charlestown," but its present form is "Charleston." About 1927 the industry was finally closed.

George F.⁴ Kreischer died January 7, 1910. His brothers also have passed away, and his son, John B. Kreischer, who had become a successful New York lawyer, died September 12, 1947, so that no member of the firm is now living. Some of Balthasar Kreischer's descendants, however, still live on the Island.

Balthasar Kreischer's mansion burned down August 1, 1931, but the great red beeches surrounding it, which he had imported from Germany, are still living. The home of Edward Kreischer is gone; that of Charles still stands, though much dilapidated, overlooking the scarred site of Kreischerville. Change has almost erased the place, as well as the name. With the closing of the works, that part of the population dependent on them moved away. The plant fell into decay and disappeared. For years the great chimneys towered above the rubble, but they too are down now,

and dealers in second-hand bricks have pretty well cleaned up the ruins. Two or three of the Androvette houses have outlasted the coming and going of the industrial village, and a store and a tavern also remain. But the "apartment building" which housed 24 families has long since gone, and most of the square wooden houses also. St. Peterskirche still stands, but it is now the Magyar Reformed Church.

Charleston has another German Evangelical Church, on Arthur Kill Road, a community house, a well-kept memorial to the men and women who served in World War II, and other modern features; but if you go down Winant Place to Kreischer Street and turn to the left, you will see a row of four cubical, green-painted structures, and a little farther on a fifth, unpainted and with another type of house built against it. These are what is left of the factory-village. Continuing to the road that wound down through the plant and up again to the Arthur Kill Road, you will find the canal that used to facilitate loading, now filled with mud and choked with rubbish, and the jagged and decaying ruins of the old docks along the shore of the Kill. Where the plant used to be, some sections of chimney lie scattered at intervals, too strongly built to break up when they fell. Beyond what is still known to present residents as "the new part," portions of a fine brick wall remain, and parts of some foundations, the latter overgrown with weeds. Here and there a large excavation, partly fallen in, shows where a building stood. The weeds have covered nearly everything, and trees, some of them of fair size, have sprung up, even in the excavations.

That is about all that can now be seen of the once busy little principality of Kreischerville. But the man who created and ruled it is not forgotten, for the Steuben Society honored his memory by naming one of its Staten Island Units for him; and on May 20, 1936, the 100th anniversary of his arrival in this country, that Unit went in a body to Greenwood Cemetery and laid a wreath on his grave.

The portraits, papers and objects given by Miss Louise Kreischer to the Staten Island Institute of Arts and Sciences, together with others loaned by her, some contributions from other donors, and material already in the possession of the Institute, were placed on display in the exhibition room of the Museum the latter part



**FIRE-BRICK FACTORY OF B. KREISCHER AND SONS
AT KREISCHERVILLE, STATEN ISLAND**

Collection of the Staten Island Institute of Arts and Sciences

of November and remained throughout December. The fine collection of family portraits has aroused particular attention. Some of them, in addition to their personal and historic value, are of artistic interest. The portrait of Caroline Haenchen, first wife of Balthasar Kreischer, though much in need of cleaning and restoration, has a charm and authority which arouses hope that a signature, not visible now, may be concealed by the frame.

A small and old painting of the tiny German town of Hornbach, the birthplace of Balthasar Kreischer, has added value because the town has now been destroyed.

The very old painting of an ancestor in the Lecoq family has points which are puzzling and might repay thorough examination; and the delightful portrait of George F. Kreischer and his twin sister Fredericka, in pantalettes and tight, stiff dresses, wins a smile from all visitors. There is also the Kreischer coat-of-arms in heraldic coloring, and a photograph album showing three generations.

Objects connected with Kreischerville and the factory include what is said to be one of the first bricks made, which were given to employees as souvenirs; a cup of heavy, white-enameled pottery bearing the name of George F. Kreischer and a small hand of similar material; and photographs of homes, factory, and products, together with business and personal papers, pamphlets, etc., constituting an unusually complete exhibit of an important place and period.

The Staten Island Express Post

ELLIOTT R. BURGHER

The year 1949 marks the One Hundredth Anniversary of the printing of the three and six cent Staten Island Express Post Stamps by the "Staten Islander," a local newspaper then owned by Francis L. Hagadorn.

These stamps, which are rare, were vermilion in color and printed on wove paper. Scott's catalogue numbers are 133 L 1 for the three cent and 133 L 2 for the six cent.

The Staten Island Express Post was one of the many independent mail routes operating in this country at that period because of the unsatisfactory service given by the Post Office Department. The Government used every means to crush these private companies, but the public continued to support them because of their moderate charges and good service. Finally the Government reduced its rates and effected needed reforms in its service, and then legislated these private posts out of business.

Established by Hagadorn & Co. in 1849 with an office at Stapleton, the Staten Island Express Post service included boxes in various public places where the "Staten Islander" was on sale. Letters placed in these boxes were collected and carried to their destination if it was on the Island; if to some point off the Island, then to some connecting system. Those directed to New York City or Bergen Point, New Jersey, were handed over to Boyd's City Dispatch Post for delivery. As will be seen from the photograph of an advertisement carried in the "Staten Islander" of Saturday, September 21, 1850, the Staten Island Express had connecting service with the Adams and Wells expresses. That part of the long advertisement which does not appear in the photograph reads as follows:

"These arrangements are such as to deserve the patronage and confidence of the public, and have only to be tried to be highly appreciated. Packages of all kinds entrusted to the Express are carried over the Ferry *under Lock & Key*, and transported in spring wagons on shore, on both ends of the route. Particular attention paid to packages marked 'valuable,' glass, etc., money packages and other valuable parcels receipted for at the office.

HAGADORN & CO'S STATEN ISLAND & NEW YORK

CONNECTING WITH ADAMS & CO'S
Eastern, Southern & Californian Expresses.



CONNECTING WITH WELLS & CO'S
Northern, Western, and S. West Expresses.

PACKAGE,

FREIGHT & BAGGAGE EXPRESS.

F. L. HAGADORN, Stapleton, S. I.

Office in New York, at the Staten Island Ferry,
foot of Whitehall street.

SUMMER ARRANGEMENT.

THE Proprietors of this Express have now established a line of Express Wagons, to run in connection with the Staten Island Ferry, meeting every trip of the boats, and delivering all goods committed to their care with the utmost safety and expedition.

They have made arrangements with the most trustworthy Agents for the punctual transmission of

PACKAGES & MESSAGES

of all kinds between the several villages through the interior of the island, as well as along the shore, and

TO AND FROM

STATEN ISLAND and NEW YORK.

“THEY ALSO ATTEND TO PURCHASES

“Of Every Description

“Any order for Goods, if merely dropped into the Express Locker on board of either boat, will be immediately attended to, and the goods returned. Such orders may also be given to the wagon, on its route, or left at the office.

“MERCHANTS, MANUFACTURERS,

“and others, may forward their Orders for Goods, and have the goods returned to them the same day. Orders of this kind should be pre-paid at the office.

“They will also enter into special contract with the proprietors of Hotels and Private Boarding Houses, and other persons having any regular correspondence with the city of New York to attend to their business by the year or season, upon such terms as will render the Express their most economical means of communication. To such persons the Express offers the most positive inducements.

“AN EXPRESS MAIL

“Leaves for New York with every boat; connecting with
“Boyd’s City Despatch Post, and forwarding

“LETTERS FOR THE U. S. MAILS

in time to reach the Great Northern, Southern, and Eastern Mails twice a day.

“Letters are forwarded to the city and delivered from every boat until after 2 P.M.

“Packages to go by the Express should be placed in the hands of some one connected with the Express or if sent to us by another conveyance should be directed “per Staten Island Express.”

“AN EXPRESS FURNITURE TRAIN,

“Consisting of five spring wagons and carts,

“Is at all times ready to move Families (at one trip) either to or from the city. Orders may be left at either office of the Express. Persons intending to remove will do well to enquire into our terms and arrangements before employing the city cartmen.”

Francis L. Hagadorn’s express-post was only one of many undertakings which made his life an active and colorful one. When

he was barely ten years old, he entered the printing office of his father, William Hagadorn, in Newark and learned to set type. At twelve years of age he began literary work, and before he was sixteen he had written poetry and little stories. Later he wrote a romance of Staten Island which he called: "The Story of the Spoon."

He worked with his father on the "Republican," established 1827 and transferred to William Hagadorn in 1831, and also on the "New York and Richmond County Free Press," both papers being printed in New York. In July, 1837, the first newspaper printed on Staten Island made its appearance, the "Richmond County Mirror." Francis L. Hagadorn was editor and proprietor, and the publication office was on Richmond Terrace, New Brighton. He continued to publish the "Mirror" for a number of years, and then merged it with the "Staten Islander," which he also owned. The publication office was in Stapleton.

In addition to his newspapers and the Express company, he was postmaster at Stapleton in 1854, 1855 and 1856. He also took a great interest in military affairs. For a short time he was First Lieutenant of the Richmond County Guards, of Tompkinsville. He rose rapidly and in a few years was commissioned Colonel of the Seventy-third Regiment, New York State Militia. Later he was appointed Quartermaster General on the staff of Governor Horatio Seymour.

When the War between the States broke out in 1861, he was appointed Major of the Seventy-ninth New York Volunteers. After serving a short time he resigned to accept appointment as Inspector General of the Army of the Republic of Venezuela, under General Paza.

He died at Georgetown, South Carolina, Friday, July 1, 1897, and was buried with the honors of war at Troy, New York.

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Staten Island Historical Society; newspaper files.

Scott's Catalogue, United States Stamps.

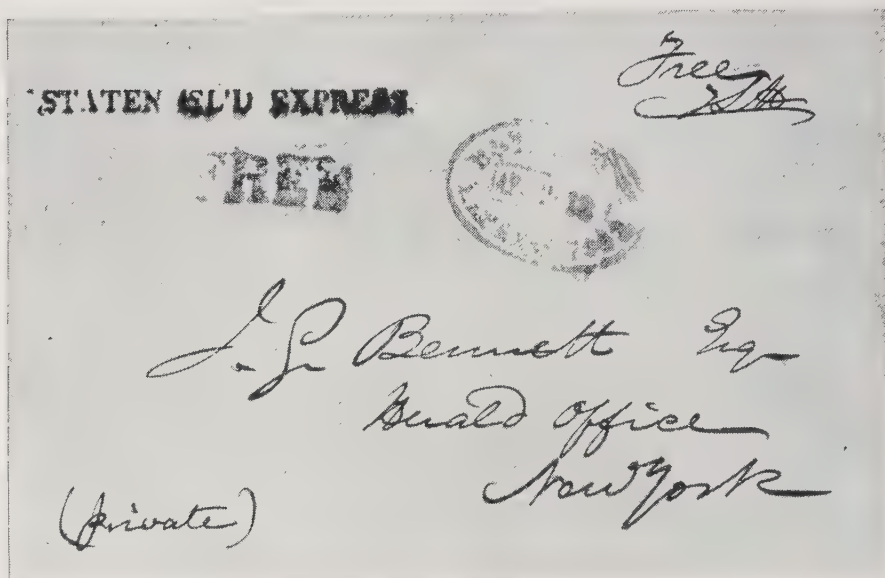
Morris: *History of Staten Island*. Vol. 2, pp. 356-8.

Stamps Magazine, September 21, and October 5, 1946; Postal

Markings; Harry M. Kornweiser.

American Philatelist, Vol. 34, 1920-21; Henry C. Needham.

Leng and Davis: *Staten Island and Its People*. Vol. 2, p. 719.



OLD AND RARE COVER WITH MARK OF STATEN ISLAND EXPRESS

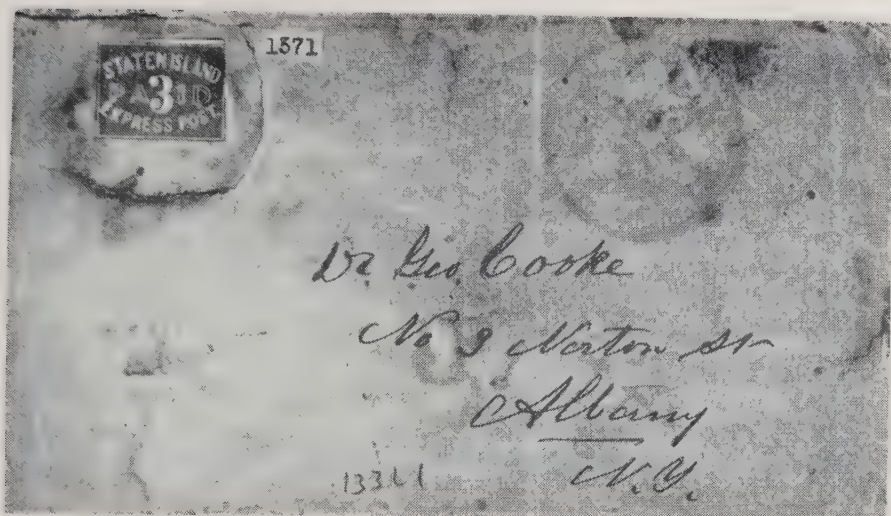
(From the Collection of Elliott Burgher)

This folded letter, dated April 26, 1850, addressed to J. G. Bennett Esq., Herald Office, New York, has a straight line marking, ten point caps reading "STATEN ISL'D EXPRESS." The letter has the Boyd's Express Post (red oval) as well as the Boyd FREE (red). On the upper right hand corner is the notation "FREE FLH" which indicates the letter was sent by Francis L. Hagadorn, the owner of the Staten Island Express.

The letter was delivered by the "Staten Island Express" to the Boyd Office and their carrier service delivered it to the famous publisher of the New York Herald. The free markings indicate arrangements between the Staten Island Express and Boyd's.

This is the only cover that has been found, to date, with the straight line "STATEN ISL'D EXPRESS" cancellation.





OLD AND RARE COVER WITH STAMP OF STATEN ISLAND EXPRESS POST
(From the Collection of Elliott Burghier)

This cover was sent from the Marine Hospital, Stapleton, Staten Island, to Dr. George Cooke, 3 Norton St., Albany, N. Y. The envelope was closed and sealed with sealing wax and the Marine Hospital impression.

On the top left is the three cent vermilion Staten Island Express Post stamp which paid the fee to the Express Company for carrying the letter to New York City, where it was deposited in the U. S. Mails. Upper right is the New York circular postmark in red, showing that the postage had been paid for the delivery of the letter to Albany.

It is interesting to note, in the "American Philatelist" of 1920, Henry C. Needham tells us that a cover with the six-cent vermilion Staten Island Express Post was discovered quite recently. It was bought from a boy by the Rev. Charles H. Jones of the First Reformed Church of Bayonne, N. J. The stamps and cover came from the files of an old estate of which Mr. George Carrigan was the executor.



Frederick W. Kost, Staten Island Artist

JEAN LEASON

Frederick W. Kost lived and painted on Staten Island for 33 years and may properly be claimed as a Staten Island artist. It is, therefore, with pleasure that we have been able to exhibit 41 of his paintings as well as associated memorabilia including photographs and sketches in our gallery from November 21 through December, 1948.

We are particularly indebted to the artist's sister, Miss Minna Kost, and to Mrs. Eileen Kaufmann and Mrs. John Ewing of Brookhaven, Long Island, for their help in preparing the exhibition and to the following Staten Islanders who generously lent paintings: Mrs. A. Benbow Elliman, Miss Clara Frederichs, Mrs. A. M. Garcia, Mrs. Tom Garrett, Mr. Edward L. Love, Mr. Walter C. Schabelitz, Mr. Albert Stirn, Mrs. Edwin Stumpp and Mrs. J. F. Wiechers.

Although Kost was born in New York City (May 15, 1861) his family moved to Staten Island when he was six years old and he continued to live here until 1900. His father became the proprietor of the Richmond County Hall, so well known when the village of Richmond was our county seat, and Frederick attended the Boehm School in Greenridge. Later the family moved to the Dongan Mansion and then to Stapleton where the elder Kost operated the German Club Rooms on Van Duzer Street.

While in Stapleton, Frederick attended the Methfessel School, later the Staten Island Academy, and it is interesting to note that among his classmates were the painter, Frederick Marshall, and one of the founders of this institution, the botanist, Nathaniel Lord Britton. Joseph Kost also operated the old Clifton House at Clifton and the family lived at 33 Belair Road.

Frederick and his two sisters spent many summers on Long Island and when his father moved west in 1900 they moved to the Island and in 1906 bought a home at Brookhaven where the artist lived until his death in 1923.

Kost was the second eldest child of a family of four children. As far as can be discovered he had no artistic background although, according to his sister Minna, his artistic talents were inherited from his mother, Katherine Becker, who was of Florentine descent.

His father, not skilled with a paint brush, evidently used his artistic talents in his cooking because he achieved quite a reputation as a chef.

However, Frederick's desire to become an artist developed at an early age. After he left the Methfessel School he studied at Cooper Union and later at the Academy of Design under George Innes and R. H. Marcy. He went to Europe in the 1880's and studied at Paris and Munich.

In order to appreciate his artistic background it is necessary to go back to the middle of the 19th century. At that time American landscape painting was influenced by the German School at Düsseldorf. This school had a marked effect on the work of the early Hudson River School and may be seen in the work of Church, Durand, Kensett and Bierstadt who painted large photographic landscapes, elaborate in detail and composition. Towards the close of the century, the French School at Barbizon began to change the style of American landscape painting. The Barbizon painters broke away from the traditions of the German School and taught the artist to ignore the large, composed painting and to be content to capture the mood and nature of a landscape as it is.

Kost worked during this transition period and the influences of both the German and French approaches are apparent in his work. Some of his landscapes such as "Moriches, L. I.," and "Old Oak Tree, Brookhaven, L. I.," are painted in broad masses of color without much attention to detail, expressing simply the salient and essential characteristics of the subject matter he portrayed. Others, including "Cedar Grove Beach, S. I.," "The Kelp Gatherers," and "Sunset," are very carefully composed and include minute detail.

A study of his work reveals his deep love for nature and a continued search for a technique to express better his emotional responses to the beauties of the American countryside. He was a retiring individual and did not seek publicity, nevertheless he achieved recognition. In 1906 he was elected a member of the National Academy. In 1900 he received honorable mention at the Paris Exposition and in 1901 and 1904 medals from the Pan American Exposition at Buffalo and the St. Louis Exposition.



(Photograph by Robert Mathewson)

CEDAR GROVE BEACH, STATEN ISLAND, SIXTY YEARS AGO

Oil Painting by Frederick W. Kost

He was a life member of the Lotos Club, Century Club, Society of Landscape Painters and the Pennsylvania Academy of Fine Arts. A year after his death the Brooklyn Museum held a memorial exhibition of his work.

Subsequently taste in painting has changed and Kost, like many other artists, became overshadowed by newer but not necessarily better painters. A re-examination of his work shows him to be



(Photograph by Robert Mathewson)

THE OLD OAK TREE

Oil Painting by Frederick W. Kost

very capable, with many of the qualities which have brought lasting reputations to his contemporaries George Innes, Homer Martin and Alexander Wyant. Because of these qualities Kost will always have a place in American art and his Staten Island subjects will find increasing interest here as time goes on.

Perhaps the following paragraph written for the Brooklyn Eagle by Mrs. Helen Appleton Read at the time of his Memorial exhibition sums up his true merit as a painter: "It is always a surprise to the younger generation to find how many painters there are who, because of their small output and their dislike of publicity, are practically unknown. An exhibition such as the present one not only affords picture lovers an opportunity of familiarizing themselves with the work of a rare and distinguished painter but points the moral of the ephemerality and unreliability of the exhibition picture and best seller."

Catalogue

Title	Size	Medium	Owner
The Old Mill.....	24 x28	oil	Miss Minna Kost
Spring Day, Old Town Farm, S.I.	22 x27	oil	Miss Minna Kost
Mill in Milford, Pa.	24 x28	oil	Miss Minna Kost
The Farm	24 x28	oil	Miss Minna Kost
East Quogue, L. I.	24 x28	oil	Miss Minna Kost
On the South Shore, L. I.....	24 x28	oil	Miss Minna Kost
Moriches, L. I.....	24 x28	oil	Miss Minna Kost
Britton's Mill, Clove Lakes, S. I.....	14 x18	oil	Miss Minna Kost
Fire Island	24 x28	oil	Miss Minna Kost
Old Town Road, S. I.	16 x24	oil	Miss Minna Kost
Joseph F. Kost.....	7½x 6½	pencil sketch	Miss Minna Kost
Vanderbilt Farm, S. I.	12 x16	oil	Mrs. Eileen Kaufmann
Old Oak Tree, Brookhaven.....	24 x28	oil	Mrs. Eileen Kaufmann
The Narrows, Fort Wadsworth	5 x 8	pen and ink	Mrs. Eileen Kaufmann
Concord, S. I.....	4 x 8	pencil	Mrs. Eileen Kaufmann
Fingerboard Road..	8 x10	pencil	Mrs. Eileen Kaufmann
Boats, South Beach	6 x 9	oil	Mrs. John Ewing
South Beach	4½x 6½	oil	Mrs. John Ewing
Hay Boats, L. I.....	4 x 5½	oil	Mrs. John Ewing
The Kelp Gatherers	30 x46	oil	Museum Collection
The Meadow	11 x16	water color	Mrs. A. Benbow Elliman
German Club House at Clove Lakes..	14 x17	pencil	Miss Clara Frederichs
Village of Richmond	12 x 9	pencil	Miss Clara Frederichs

Title	Size	Medium	Owner
Staten Island Mill..	9½x12	pencil	Miss Clara Frederichs
New Brighton on the Kill von Kull ..	9 x12	pencil	Miss Clara Frederichs
The Beach from the Billogg House.....	9 x12	pencil	Miss Clara Frederichs
Old House opposite Woodrow Church	9 x12	pencil	Miss Clara Frederichs
Continental Hotel, Port Richmond.....	5½x10	pencil	Miss Clara Frederichs
Views of Billogg House	9 x12	pencil	Miss Clara Frederichs
Sand Sloop, South Beach, S. I.....	9½x14	oil	Mrs. A. M. Garcia
The Old Latourette Farm House	14 x16	pastel	Mrs. Tom Garrett
The Old Hotel, Rossville	7 x10	pencil	Mr. Edward L. Love
Cedar Grove Beach, S. I., 60 years ago	24 x28	oil	Mr. Walter C. Schabelitz
The Farmhouse	8 x10	oil	Mr. Albert Stirn
Taunton River, Mass.	8 x10	oil	Mr. Albert Stirn
Sunset	32 x39	oil	Mrs. Edwin Stumpp
Autumn Afternoon, Fox Hills	16 x20	oil	Mrs. Edwin Stumpp
Stapleton in Moonlight	11 x14½	oil	Mrs. Edwin Stumpp
A Fisherman's Hut, L. I.	13 x16	oil	Mrs. J. F. Wiechers
The Roadway	20 x24	oil	Mrs. J. F. Wiechers
A Long Island Pond	10 x14	oil	Mrs. J. F. Wiechers

Fortieth Annual Christmas Bird Census

MATHILDE P. WEINGARTNER

On December 26th, 1948 five observers tramped the woodlands and fields of Staten Island to count 46 species of birds to be recorded in the 40th annual bird census taken on the Island. Strong cold winds sweeping over exposed areas kept the birds in such areas low in the brush and 8 to 18 inches of snow made the going difficult for the observers.

Warm weather, continuing until past the middle of December, followed by two snowstorms and a cold wave, resulted in several species usually considered migratory birds remaining over, and the intrusion of a few northern forest species, probably driven southward by the storms. Among the former, a greater than usual number of Robins, a Hermit Thrush, a Towhee and a Catbird were out of season for this time of the year.

Casimir Redjives was startled to flush 6 Short-eared Owls and observed them circling over the dunes at Oakwood Beach. Lee A. Ellison observed 36 Pine Siskins feeding on the seedpods of a Sweet-gum tree.

The observers were: Lee A. Ellison, Herbert Curl, Jr., Charles Pearson, Casimir Redjives and Mathilde P. Weingartner.

Following is a list of the species observed: Horned Grebe, 35; Black-crowned Night Heron, 1; Black Duck, 200; Greater Scaup Duck, 6780 (est.); American Goldeneye, 65; Bufflehead, 81; American Merganser, 1; Red-breasted Merganser, 1; Red-tailed Hawk, 1; Rough-legged Hawk, 2; Sparrow Hawk, 5; Ring-necked Pheasant, 8; Great Black-backed Gull, 5; Herring Gull, 5092 (est.); Laughing Gull, 15; Bonaparte Gull, 4; Barn Owl, 1; Short-eared Owl, 6; Flicker, 1; Downy Woodpecker, 4; Horned Lark, 4; Blue Jay, 23; American Crow, 22; Fish Crow, 1; Black-capped Chickadee, 26; White-breasted Nuthatch, 3; Brown Creeper, 2; Catbird, 1; Robin, 11; Hermit Thrush, 1; Ruby-crowned Kinglet, 4; American Pipit, 4; Starling, 131; Myrtle Warbler, 3; English Sparrow, 34; Red-wing, 20; Cardinal, 17; Pine Siskin, 36; Goldfinch, 13; Towhee, 1; Slate-colored Junco, 67; Tree Sparrow, 100; Field Sparrow, 11; White-throated Sparrow, 29; Fox Sparrow, 2; Swamp Sparrow, 2; Song Sparrow, 34.

Literature Relating to Staten Island

"Father Knickerbocker Rebels." By Thomas Jefferson Wertenbaker. Scribner.

Readers who find pleasure in a well documented history will be delighted with Dr. Thomas Jefferson Wertenbaker's *"Father Knickerbocker Rebels."* Those who want a clear, readable account of a period will be equally pleased with this volume which presents such a vivid and moving picture of life in New York City from 1765 to 1783. The liberal inclusion of reproductions of photographs, maps and prints adds greatly to the excellent format. Paper, print, and illustrations combine to make a book very much in harmony with the splendidly organized subject matter which it contains.

"The history of New York City from 1765 to 1783 is as fascinating as it is tragic, marked as it is by clashing interests, by heroism and baseness, by gaiety and suffering, by sudden wealth and sudden poverty, by fratricidal strife, by intense hatreds, by cruelty, by corruption," the author states in his preface.

Two short chapters set the stage for the Revolution and the struggles going on, not only between the radical and conservative groups, but within individuals who had to make a choice between King and country.

Staten Island is mentioned only briefly; the conference at the Billopp House is recorded with fidelity, and since it is a story of staunch resistance to appeasement is a worthy inclusion. The account of the defrauding of the farmers of Long Island and Staten Island and the seizure of property and woodlands by Clinton's men is indicative of the corruption and graft which was prevalent.

One may find in this chronicle a report on many incidents and policies which have a counterpart in recent and current events. The Tory 'refugees' from neighboring states poured into New York by the thousands; the 'dictator' Clinton was responsible for the abuses of his 'henchmen'. Such a statement as, "Despite the overwhelming evidence of the cruelty to Americans on prison ships, the Loyalists in New York, and to some extent the Revolutionists were deceived into thinking that things were not so bad as had been represented," might well be a bit of contemporary reporting.

Those who have not dipped into Carl Sandburg's "*Remembrance Rock*" may want to compare his fictional account of the Revolution, particularly the New York scenes, with Dr. Wertenbaker's, as each bears the imprint of painstaking research.

"*Proud Destiny*" by Lionel Feuchtwanger also suggests itself as a stirring account of Dr. Benjamin Franklin pleading for aid to the Colonies at the court of Marie Antoinette and Louis XVI.

"*This was New York*" by Frank Monaghan, although published five years ago, might well be a sequel to "*Father Knickerbocker Rebels*" for it continues the story of life in New York with a lively description of the nation's capital in 1789.

MARY J. BOWLES.

"*Ever After.*" By Phyllis Whitney. Houghton Mifflin & Co.

Miss Whitney, who lives on Staten Island and who for three seasons has given a course in writing at the Institute of Arts and Sciences, has written several successful novels for children and teen-agers, one of which, "*Willow Hill*," was a prize-winner; and now she has another book on the stands.

It is safe to say that this one also will catch and hold the attention of the readers for whom it is written, for, like the earlier tales, it deals realistically with questions which young people today know they are facing. Marriage vs. Career; A Place to Live; Making Your Work Good Enough; these and other problems are handled with understanding and from a practical point of view, and out of them and her young characters Miss Whitney has constructed a pleasant love-story.

Staten Islanders will find a little special interest in the book, because although the story is set principally in Manhattan, the writer has made use of her acquaintance with the Island in several incidents. Marel, a young artist, and Chris, a young writer, each just starting up the ladder of a career, ride on the ferry-boat, visit an Island air-field, and eat at a restaurant "set down on the edge of a small lake," and also in a diner on Bay Street. Chris writes a mystery novel and calls it: "*Fear on the Ferry.*" There are some bits of description which reflect the charm of the hills and fields and the changeful beauty of the bay; and the book leaves us feeling that we have been glimpsed by a friendly eye.

M.A.

Institute Notes

Editorial Note. The *Proceedings*, now issued quarterly in place of the *Museum Bulletin*, will be edited by Mabel Abbott as part of her duties as Curator of Literature. Her literary experience and wealth of knowledge about Staten Island will make our *Proceedings* a valuable contribution to Staten Island literature.

Institute Lectures. January: A combined lecture with the members of the Staten Island Zoological Society, Sunday, January 23, 1949 at 4 P.M. at the Zoo. John W. Hess, Commander, U.S.N.R., will show his colored motion picture, "Australia's Modern Curiosity Shop." Tickets, which are ordinarily necessary for admittance to Zoo lectures, will not be required at this combined meeting.

February: William T. Davis Memorial Lecture at McKee High School, Saturday, February 19 at 8:15 P.M. "Caravan to Tibet," Nicol Smith's famous colored motion picture and lecture.

March: William T. Davis Memorial Lecture, at Mc Kee High School, Saturday, March 19 at 8:15 P.M. "Antarctic Adventure," by Commander Finn Ronne, illustrated by colored motion pictures.

Art Exhibitions. An interesting exhibition of work by Warren F. Robinson, newly appointed head of the Art Department at Wagner College, opened with a reception on January 9 with Mrs. Walter Langsam and Mrs. Robinson acting as co-chairmen of the reception committee. The exhibition will remain through February 9.

The annual exhibition of art by students of Staten Island public and private schools will be shown in the gallery from February 12 to February 26. A reception for exhibitors, teachers, parents and friends will be held on Saturday, February 12 at 2:30 P.M. John M. Avent, Principal of Curtis High School, will open the exhibition.

A new experimental exhibition is being prepared to illustrate the *processes* of observing, understanding and practice as developed in our Museum young people's art classes. Since these elements are common to any observation of art (or other subjects

for that matter) the exhibition should be of wide interest. A reception for the young artists and their friends will open the exhibition on Saturday, January 15 at 2:30 P.M. Miss Leason and Mrs. Gerow are in charge.

A number of Staten Island agencies and individuals are arranging an exhibition, "Crafts for all Ages," which will be in the gallery from March 6 through April 6. Mrs. Hjördis Ohberg is assisting Miss Leason with the arrangements.

The Memorial Exhibition of paintings by Frederick W. Kost (1861-1923), and a Special Exhibition of portraits and other objects relating to Balthasar Kreischer and family were opened at a reception sponsored by the Section of Art, at the Museum on Sunday afternoon, November 21. Both of these collections are mentioned elsewhere in these *Proceedings*.

Annual Print Exhibition. The annual exhibition of prints made by members of the Staten Island Camera Club will open with a reception on Sunday, January 16 at 2:30 P.M. and will continue for one month. On the evening of Wednesday, February 16, the Club will be hosts to the Metropolitan Camera Club Council, at which time the Council's "Print of the Month" competition will be held. Since nearly 100 clubs compete and each club may submit four prints, this event offers a splendid opportunity for Staten Island enthusiasts to view the best prints made in the metropolitan area. The committee consists of Thomas J. Fisher, President; William D. Sullivan, Vice President and William J. Hunn, Program Director. Mrs. Maxine White heads the refreshment committee, assisted by Mrs. Lucie Adams.

Christmas Seal Competition. The Staten Island Philatelic Society in cooperation with the Staten Island Tuberculosis and Health Committee sponsored an Island philatelic competition to help promote the sale of Christmas seals. Walter Kuhn was chairman of the contest.

Research Associate. The Board of Trustees, at its meeting on October 18, 1948, elected Elliott Burgher a Research Associate in the field of local ethnology and Mr. Burgher was introduced at our meeting on November 20. The exhibition of Mr. Burgher's Indian

material was noted in the October *Proceedings*. He is also interested in philately, as noted in his article on the centennial celebration of the only known Staten Island stamp.

Institute Courses. One hundred and forty-eight adults enjoyed our courses last fall and it is not too early for you to plan now for a pleasant and profitable experience for the spring term. The program will be mailed with the February calendar and you can register during the second week of February while courses begin in the third week of February.

Accessions

Since our report in the September Museum Bulletin, 70 accessions have been added to the Museum. These range from single volumes purchased for the library to the complete Golden Anniversary exhibit of the Borough of Richmond presented by Borough President Cornelius A. Hall.

Scientific: We were fortunate to be able to report at our Institute meeting of November 20 the gift of Mr. Howard Notman's valuable scientific collections consisting of over 1,000 boxes of insects, largely beetles, including 53 type specimens named by Mr. Notman and two named for him. This collection includes also ten specimens as yet unidentified, with the possibility that some of them may be new species. There are also a large collection of rock specimens illustrating most of the geological periods; over 1,000 rare books, and a great deal of scientific equipment. This is the largest scientific gift we have received since the Davis bequest and we are grateful to Mr. Notman for this splendid addition to our collections.

Paintings: These include 14 Adirondack scenes painted by Mr. Notman; two Greek scenes "Erechthyum" and "Parthenon" by Fred Stahr presented by his sister Miss Marie Stahr; the birthplace of Balthasar Kreischer, Hornbach, Bavaria, and a portrait of Henry Zumberger, the gift of Miss Louise Kreischer in addition to Kreischer family portraits previously listed; portraits of Edwin T. Prall and Rachel Moore Thompson Prall, a bequest from Miss Edith M. Prall; "Fresh Kills Meadows," from the estate of Carolyn C. Mase, Francis C. Millspaugh, Executor.

Photographs: Of special interest are 18 photographs of old Kreischerville, the gift of Herman Guether and aerial photographs of the Island taken and presented by W. O. Davies.

Books: Several individual accessions of some interest have been overshadowed by the gift of Mr. Notman's library as noted above, containing over 1,000 volumes, many rare and attractively bound, and particularly relating to insects.

Historical: Objects in this group include three prints of old Staten Island added by purchase, material relating to the Kreischer plant, the gift of Miss Kreischer and Mr. Guether; documents relating to Barrett Nephews & Co. and other genealogical material, the gift of Mrs. Clyde S. Babbitt; a child's chair considerably over a hundred years old, which belonged to S. R. Smith, founder of Staten Island Hospital, the gift of Mrs. W. E. Jackson; two models, "DeWitt Clinton" train, and ship "Flying Cloud" a bronze plaque, made by John Koestner and presented by him; a model of the ship "Sovereign of the Seas" made and given by Mr. Notman.

Membership

We welcome the following who have become Institute members up to December 15, 1948: Peter Dicke, Mrs. Sarah R. Friedel, Mrs. E. K. Garrett, Miss M. Adelaide Irving, Siegfried Kahn, Lyman M. Kelley, Miss M. Rosalie Leiding, Dr. M. O. Lewis, Joseph A. Marzullo, Thomas F. Morris, Albert Olson, Alexander Pripadcheff, Lloyd W. Raymond, Warren F. Robinson, Miss Louise Schmidt, Mrs. Virginia Schneyer, Miss Patricia Stark, Albert L. Stirn, Mrs. Lee Szabo, Mrs. Elsa P. Wells, Mrs. J. Frederick Wiechers.

Patron

The Board of Trustees, at its meeting on October 18, 1948 elected Howard Notman a Patron in recognition of his extensive gifts to the Museum.

PROCEEDINGS of the
TATEN ISLAND INSTITUTE
of ARTS and SCIENCES



VOLUME XI

NUMBER 3

April, 1949

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DR. JAMES PAUL CHAPIN

Portrait taken by Dr. Orrin Sage Wightman, F.R.P.S., at Dr. Chapin's election as President of Explorers' Club.

Dr. James Paul Chapin

Dr. James P. Chapin, President of the Staten Island Institute of Arts and Sciences, has been elected President of the Explorers' Club. The election took place on January 24th. The Presidency of this distinguished group of travellers into far and strange places comes to Dr. Chapin because of his repeated expeditions into the jungles and mountains of Africa, the South Sea Islands and tropical America for the American Museum of Natural History.

Dr. Chapin is a widely known ornithologist, having been until his recent retirement Associate Curator of Birds at the American Museum. His travels have been in the interest of science; and while their results have been chiefly in his own specialty, they have also yielded new material of value in other lines of zoology. His long search for and final discovery of the "Congo Peacock" was the subject of great interest, both scientific and popular.

He joined the American Museum of Natural History when he was only sixteen years old, and was sent four years later with an expedition to the Belgian Congo headed by Herbert Lang. His work there established him as an important member of the Museum's staff, and he led several other expeditions, most of them to Africa, although he has visited many parts of the world. One trip took him to Pitcairn Island, which is peopled by descendants of the mutineers of H.M.S. *Bounty* who landed there in 1790.

Dr. Chapin has written three out of four volumes on Birds of the Belgian Congo, and is now completing the fourth at the desk which he still retains at the American Museum. The photograph which we publish herewith was taken by his friend and colleague of the Explorers' Club, Dr. Orrin Sage Wightman, who has also presented to the Institute a fine enlargement.

PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES, Vol. XI, No. 3, April, 1949. Published Quarterly in October, January, April and July, by the Staten Island Institute of Arts and Sciences, 75 Stuyvesant Place, Staten Island, N. Y., and entered as second class matter at Staten Island, N. Y., under act of August 24, 1912. Mabel Abbott, Editor.

Buck's Hollow Survey

I. C. G. COOPER

Among the lovely spots of Staten Island, Buck's Hollow, which is the north-eastern part of LaTourette Park, takes a high place. Despite the ravages of woodland fires which have at various times swept over it, the area still has a rich variety of trees, shrubs and wild flowers.

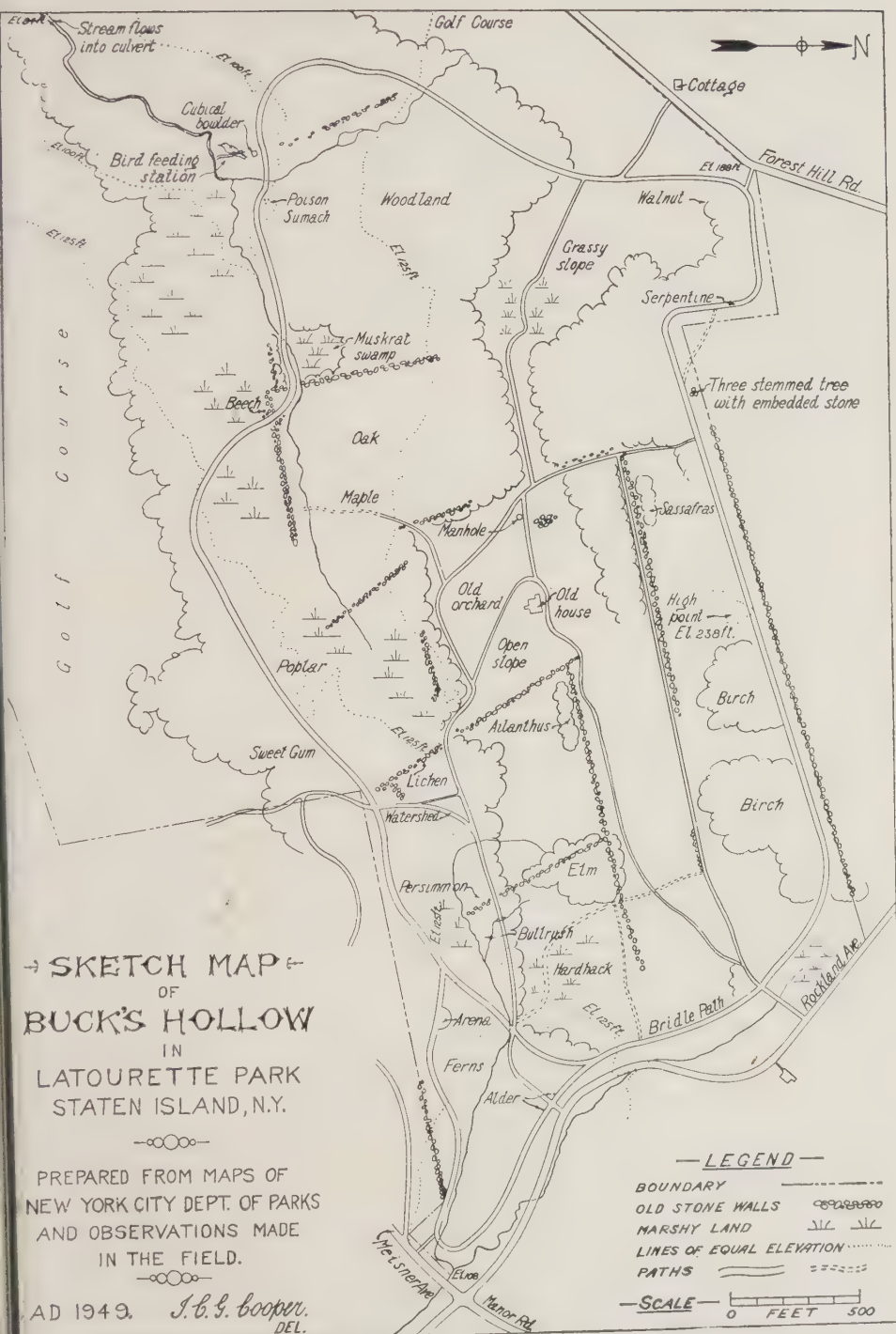
It was to this parkland that the Sections of Natural History and Microscopy of the Institute turned when a section of our countryside was to be chosen in which to carry out an experimental ecological survey.

Natural history students of former days, and sometimes even now, have been prone to confine their researches very closely to specialized branches of botany or zoology. More modern scientific thought sees the world of nature as one whole, all integrated and functioning together with each family interdependent. To bring to their members a living picture of this relationship, the leaders of the Sections mentioned initiated an ecological study in which interested students of both groups are co-operating.

An area had to be selected which presented as wide a terrain as practicable, within not too large an acreage and reasonably accessible. It was agreed that the undeveloped part of La Tourette Park offered a good opportunity for the project.

The property begins with its most easterly point at the intersection of Meisner Avenue, Rockland Avenue and Manor Road, about half a mile northwest of Egbertville. Rockland Avenue, towards Brielle Avenue, is its northeastern boundary. Meisner Avenue, for a short distance, forms its eastern edge while part of the wooded area extends west to Forest Hill Road. The northern and southern boundaries lie along the hill sides and in between lies Buck's Hollow. Why it is so called or just how much of the valley should be included in the Hollow we do not know; but the study of the whole tract is being referred to as the "Buck's Hollow Survey."

A brief description of the section will make clear its value for the projected study. The northern ridge rises to a height of 238



feet. It is partly wooded and partly open and rolling and somewhat dry. The southern slope reaches 185 feet within the parkland but receives drainage from higher land beyond. The valley between has a high spot about 130 feet above sea level and slopes to 100 feet at its eastern corner and down to 80 feet at the south end. A slight rise at about one-third the length of the valley divides the swampy bottomland, causing the drainage to flow in two directions. From one side a stream flows to the eastern corner where it joins the brook which runs parallel to Rockland Avenue. The other end of the swamp drains through LaTourette Brook which eventually passes into a culvert under the golf course at the southern end of the wooded land.

Geologically the area lies above the serpentine and is covered with drift material. The southern part of the park constitutes part of the terminal moraine. Several relics of large stone walls cross the area. These were largely built of the trap boulders which were plentifully strewn through the valley by the glacier.

There was probably considerably more water in the Hollow at one time. The stream which runs along the north-eastern edge receives the drainage from the Seaview area. This stream on old maps is called Saw Mill or Dead Man's Brook. On the Williams map as late as 1919 the part of Rockland Avenue between Brielle and Manor Roads is marked Saw Mill Road. Saw Mill Brook led into the Egbertville Ravine which at one time was dammed to form the mill pond of Conner's Saw Mill. It is quite possible that the mill pond backed up the drainage of Buck's Hollow into a considerable pond now only marked by the swampy spots from which the two brooks flow.

Thus with swamp and stream, open and wooded hill sides, in an area more or less protected by supervision of the New York City Department of Parks, there is a favorable opportunity for study of a wide variety of conditions where there is little chance of interruption by commercial exploitation.

Buck's Hollow must have been very beautiful in its prime. On the western slope there remains the foundation of the Heyerdahl family home. Standing on the old foundation and looking across the valley one sees traces of a wide cultivated strip on the lower slope. Beyond is the swamp and woodland. In earlier days many large trees existed whose stumps or fallen boles are still scattered

among the later growth. Standing on the knoll one cannot but conjure up a vision of tranquil beauty. Much has been destroyed but much remains for him who will seek it.

Monthly walks through the area were arranged commencing with ten present in the middle of April, 1948. Although almost rained out on the chosen days through the summer, some were present on all scheduled trips and several independent explorations by individuals were made until late in the Fall. The ground is crossed by several footpaths and the old single track road which led into the homestead remains. Under park control a bridle path roughly parallel to the area under survey has been added. This section covers approximately 220 acres and has its greatest length about one mile running east and west, and greatest width four-tenths of a mile. In such a stretch of woodland it is not easy to fix the locations of "finds" but the problem of topography has been overcome and we can now use certain recognizable marks as guides for records, and starting points for explorations.

The first walk produced a very interesting discovery. This was twenty plants of bloodroot. This lovely plant of spring is almost extinct on Staten Island, being known only in three other localities. The finding of almost as many more plants as those previously known to exist gives hope that it may be a long time before our vaunted civilization eliminates bloodroot from New York City limits.

The trees of the area have been found to belong to the "Oak-Sweet Gum-Persimmon" forest type which exists along the eastern shore of New York State mainland, the Connecticut shore, southern Long Island and Staten Island. There is a predominance of oak throughout the southeastern woods of Buck's Hollow and a little sweet gum. On our second visit we explored a stand of about 85 persimmon trees measuring from 2 inches to 7 inches in diameter. Twenty of these bore fruit during last summer. More of these trees have since been found in the area. Although white and red oaks dominate the trees, nineteen other kinds have been recorded, including a stand of black walnut and some relics of chestnut.

As would be expected in second growth areas, several shrubby trees are found. Mixed with more common viburnums and aronias, some dogwood and pinxter bloom remains. A clump of staghorn sumac is among the rarities.

Ferns cover the woodland floor in profusion. The commonest are cinnamon and interrupted ferns, while in the wet lowland sensitive fern is frequent. Our greatest finds were a few stems of maidenhair, some plants of the rattlesnake fern and nestled in a half buried spring, a little ebony spleenwort.

The flowering plants are particularly interesting. Besides the bloodroot survivals of false miterwort, false indigo, hardhack and white baneberry came to our notice. The moist southeastern ridge and valley have many of our choice spring flowers including Canada mayflower, trout lily, white violet, spring beauty, oakesia and sweet cicely, and in the fall the open lands of the west are yellow with various golden rods.

The study of the non-flowering plants can be hardly said to have been begun. These can only be found by close systematic search and require microscopical research for their identifications. Possibly seven hepatics have been separated, four lichens, several mosses, a few algae and some diatoms. Other classes under study are insects and fungi. The nature of the hardness and acidity of the waters in the streams is also under investigation.

Buck's Hollow is now the locale of our largest bird feeding station, where suet and seed are placed to encourage the stay of winter bird visitors.

The appended sketch map will give a general idea of the tract under investigation. The flow of the main streams with the dividing line at elevation 130 feet, the location of the high spots, the major footpaths, the bridle path, the old foundation and lines of the stone walls have been shown to assist in locating the various discoveries. Having learned to find our way about and the general characteristics of the natural history of the Hollow, the major objective of the study is fully open to extension. What are the relationships of the various classes of life to be found there to each other and to the conditions under which they exist?

Since the area is park land no collection of plants has been made. However, lists of the plants and insects so far recorded may be consulted in the Museum Library. The survey adds to the usual use of a park for pleasure, the broadening of one's knowledge and understanding of the workings of Nature. The project is open to anyone who has a love for natural history and is willing to devote some time to study.

The group is indebted to Mr. Lee A. Ellison for his persistent work in tracking down the more rare flowers, hepatics and mosses, and for his water studies. His previous knowledge of the Hollow has helped the group in orienting themselves to the area. Mr. E. Rundlett has recorded the trees and shrubs and set up the sanctuary for the birds. Mr. C. Ericson has been of great assistance in identifying flowering plants, Mrs. E. Cole—insects, Miss M. Weingartner—ferns, Mr. R. Meyer—grasses, Mr. J. Burke—diatoms. Mr. R. S. Coles covers geology and the writer algae. The help of any person having interest in any phase of natural history study will be appreciated.

The Old Tollhouse at Rossville

MABEL ABBOTT

Old tollhouses have taken their place in American history among the picturesque features of a vanished period. The modern, stream-lined booth where motorists slow a split second to touch an outstretched hand before speeding across a steel bridge is an entirely different thing. The old tollhouse where the traffic of the countryside—hay wagons, horseback riders, family carriages, peddlers' carts—paused to pay a few cents, grumble about the road and exchange a word of neighborhood news with the tollkeeper was part of the daily life of the community and there is nothing just like it today. Most of these structures have long ago disappeared without trace. Probably few still exist anywhere. For this reason it is highly gratifying for the Staten Island Institute of Arts and Sciences to be able to announce the recent discovery of one of the Island's old tollhouses, still standing, though not on the original site, and still occupied.

The late Sheriff Abraham Winant of Rossville lived on the Fresh Kill Road (now Arthur Kill Road) near the foot of Shea's Lane (now Rossville Avenue), in a house built by his father on part of the original Winant tract. His son, W. M. Winant, who was born and still lives in the same house, remembers being told by his father that the tollhouse stood, in the days of its official use, at the top of the hill which descends into Rossville from the north, and on the side of the road towards the Kill. Mrs. Frances Paduani, present owner of the structure, thinks she remembers hearing her father say that it stood beside the old Inn on the Arthur Kill Road; and Mr. Louis Levy of Rossville was told as a boy that it had stood almost exactly at the foot of Shea's Lane, beside the brook that crosses the road there. These three recollections together establish its location on the Arthur Kill Road and within a space of no more than two city blocks.

Some tollgates were established by the Richmond Plank Road Company in 1853. Apparently this was one of them. It was sold in 1867 and removed from its site, and its identity was forgotten by all but its owner and one or two old-timers like the late

*Recd Rossville April 6, 1867 of Sabina
Essig the sum of one hundred and
fifty dollars in full for a certain House
the old plank road toll House*
\$150  *L. R. Means*

MEMORANDUM OF SALE OF OLD TOLLHOUSE.

Napoleon Woglom of Rossville. It was a chance remark by Mr. Woglom not long before his death which led to the search for the building.

"The old tollhouse is still in Rossville," he said, "but it has been moved. It belongs to the Essig family."

With a friend this writer recently set out on a hunt for the house and found it at No. 77 Poplar Avenue. It is now the home of Mrs. Frances Paduani, daughter of John Essig and granddaughter of Mrs. Sabina Essig. Mrs. Paduani has among her family papers a memorandum in faded handwriting which reads:

"Recd Rossville April 6, 1867 of Sabina Essig the sum of one hundred and fifty dollars in full for a certain House the old plank road toll House.

\$150 (stamp)

L. R. Means"

The signature might be either "Means" or "Mearns," or it might have an "i" in it. This reminds us that the house which stood until a few years ago at the northeast corner of Arthur Kill Road and Rossville Avenue was owned at one time by a family whose name appears in Leng and Davis' history of the Island as "Mearns," but is remembered in the neighborhood as "Means." Whether the toll house was owned by Mearns or Means and used by the company, or whether he acquired it when the tollgate was discontinued, we do not know, nor do we know who originally built it or when.

An article in the Richmond County Gazette of December 23, 1863, described the wretched condition of the old Richmond Road, in which vehicles were often mired hub-deep and had to be dragged out by teams of oxen. It continues:

“Such was the principal thoroughfare of Staten Island until about the year 1853, when a plank road company was formed with the intention of building a single-track road from Vanderbilt’s Landing to Rossville. The road was completed only a short distance beyond Richmond, and three toll-gates established in the space of seven miles, the charge being three cents for a one-horse vehicle and six cents for two horses, and the track being built on one side of the road could only accommodate vehicles going one way, and as each one who paid considered himself as having the right to the track without paying much deference to the ‘laws of the road,’ much inconvenience and some accidents occurred from the natural disinclination everyone had to ‘turn out.’ ”

In 1853 there was a “Map of the Richmond Plank Road from Vanderbilt’s Landing to Rossville,” confirming the statement that it was the intention to carry the planking that far. On Walling’s Map of 1859 several tollhouses were shown, one being on the Fresh Kill Road, northerly side, a short distance east of the corner of Shea’s Lane; which corresponds to Sheriff Winant’s description of the site. According to the Sheriff, the road was “corduroy” at that point.

In the fifties and sixties Rossville was a place of some importance, and while much of its traffic was carried by water, (three steamboats landed there daily), yet the roads into and out of the town must have been well traveled. The great Mason and Ross mansions on the shore, the little hotel, frequented by fishermen, St. Luke’s Church, the crowds of strawberry pickers who came from far and near during the season, all contributed to the travel. Dr. Golder’s horse and buggy jogged along the roads day and night to visit the sick. When the ordinary route to Philadelphia was closed in winter passengers and goods were brought from Tompkinsville to “Blazing Star” (Rossville) by wagon and took boat there. In short, if the Richmond Plank Road did extend to Rossville and operate the toll-gate there, the traffic of that busy community must have helped considerably to swell its profits,



(Photograph by Mabel Abbott)

**OLD TOLLHOUSE, ROSSVILLE,
AS IT NOW IS**

which seem to have been large, at least for a time. In "Old Names and Nicknames" by William T. Davis, there is a quotation from the "Staaten Islander" of January 23, 1856, to the effect that the Richmond Plank Road had paid fourteen per cent and "is now paying a dividend of 20 per cent."

When the toll-gate was discontinued we do not yet know. The house may be presumed to have been moved about the time it was sold to Mrs. Essig. It was at first taken to the rear of its present location and then moved up to its present site, nearer Poplar Avenue. It consisted at first of two rooms on the ground floor and two above, but it has been considerably added to, and is now covered with red-painted shingles. In the interior Mrs. Paduani's father, John Essig, took out almost all of the old woodwork, widened the doorways and otherwise altered it.

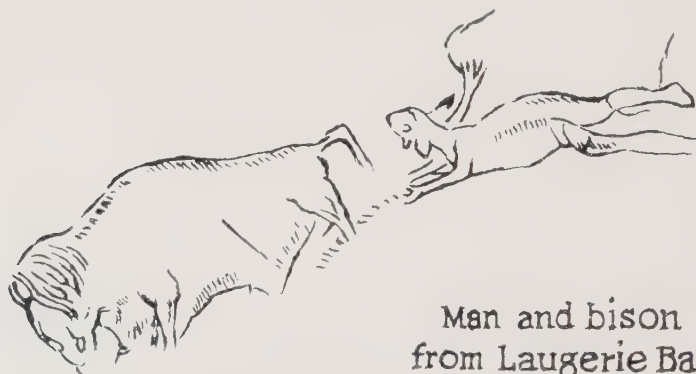
At a casual glance the house gives no indication of its age and history. The old beams are sturdy in their newer shell, and if nothing happens it may last a long time yet. It is to be hoped that this account will awake some old memories or bring to light some record which will furnish more details concerning it.

New Evidence in Support of the "Dead-Model" Theory of Prehistoric Cave Art

PERCY LEASON

In 1939 my theory that prehistoric cave artists of France and Northern Spain commonly made studies of dead animals, was published in the Proceedings of the Prehistoric Society in London. (Jan.-July). It has previously been read at the Cambridge meeting for the Advancement of Science, thanks to the kindness of Dr. Donald F. Thomson and others, who encountered much opposition. In 1942 the theory had its first American publication when I mentioned it briefly in a lecture on Some Factors in the Rise and Decline of Painting. This lecture was given at the Staten Island Museum and was published in its Proceedings, Parts 1, 2, Vol. 10, Oct. 1942-May 1944.

Since then I have heard little or nothing to indicate whether the theory was still alive in the minds of others. Nor have I done



Man and bison
from Laugerie Basse.



anything about it except to gather odd scraps of supporting evidence as they turned up. Lack of opportunity made it seem necessary to leave to other serious students the essential field work on the site of the caves. But it turns out that what looks like most startling evidence can turn up in the most unexpected places—in this case a book on cave art which I have thumbed many times over the years.

I was recently tracing one drawing from this book in preparation of an exhibit on art origins, when a casual glance at the drawing *Man and Bison*, reproduced here, suddenly revealed it in a new light. It had previously been called *Man Stalking a Bison* and I had never questioned the rightness of this title. Now I could only view it as an artist on a ledge actually making a study of a dead beast!

To test this idea, I made an accurate tracing of the drawing and turned it into the reproduced wash drawing. It will be noticed that the only liberties taken were those of amplification—the effect of light and shade, the skin clothing of the man, and slight changes in the drawing of his nearest leg, his shoulder and head.

Certain features of the original drawing should be examined: the underside view of the breast, that characterises so many cave pictures; the calm pose of the man, the widespread legs which give no hint of action, certainly nothing of stalking; the positions of the two arms; the suggestion of the left hand which might have been holding the typical stone slab or piece of bone on which the artists made many of their incised drawings, etc. Moreover the perspective—the relation of the size of the man to that of the beast, works out very well indeed if we assume that the ledge was about 12 or 15 feet above the bison.

I have at various times made drawings much like this to explain how the cave artists got many of the strange and puzzling features of their animal pictures—the underside view, the tip-toe feet, the lifted tails, projecting tongues, the near legs shorter than the further ones, etc.

I do not of course believe that this drawing proves the theory that it was common practice of the artists to make studies of dead animals. But I am convinced that taken with other curious features which have been described and illustrated, it shows that the theory is worthy of serious study.

Personal Recollections of Lincoln

Told to DR. CLARENCE T. LANSING, (20 Morris Crescent, Yonkers, N. Y.) by his father, William A. Lansing.

My father, William A. Lansing, enlisted at the age of nineteen, at Canton, New York, on August 18, 1862, in a cavalry regiment which was organized by Lieut. (later Col.) James B. Swain in the winter of 1861-62, and was at that time known as "Scott's 900" in honor of Assistant Secretary of War Thomas A. Scott, a friend of Col. Swain. Later it became the 11th New York Cavalry.

At first, and before my father joined it, "Scott's 900" was encamped on Staten Island, at Quarantine Landing; and it remained there that winter. Recruits were received from many places and sent to the camp, and by January 1, 1862, nearly 400 men had been enrolled. According to Thomas West Smith, a private in Troop F, who later wrote "The Story of a Cavalry Regiment," forty-four men enlisted on Staten Island. This does not prove, of course, that they were all Staten Islanders, but it would seem likely that some of them were. Their names were: Thurston Bagot, Thomas Townsend Barrett, Henry C. Bates, William Beggs, Alexander G. Campbell, Charles Clark, John Clark, Isaac O. Crissey, John Devarney, Peter Ervin, Hobart S. Fitzgerald, Robert Foskey, William Frazier, William H. Goodale, Franklin B. Hallock, Edwin C. Hand, William F. Handrick or Hendrick, William Hanifin, James Holland, Albert B. Holmes, George P. Horton, John Jourdon, Daniel Kelly, James Kelly, Joseph C. Kenyon, Thomas B. Knowles, Edward Lalondrie, Michael Larkin, Charles Levi, Stephen Longfellow, George E. Marshall, Thomas McCahey, John (or E. J.) McCarty, James McKenzie, William Moylan, Jacob A. Myers, James Patterson, Edgar Smith, Edward Smith, John D. Smith, Reuben I. Smith, Samuel L. Steele, (or Sam'l S. Cannon), Francis Thompson, Dexter Wells, Samuel H. Wilkeson.

Most of the Staten Island enlistments were placed in Company A.

Headquarters were in a two-story house close to the water. Drill was carried on steadily, but the men were allowed to visit the city once in a while.

According to Thomas West Smith, when the time came, early in May, 1862, for them to leave, by steamer to South Amboy and thence by train for Washington, many of the men celebrated by getting drunk. These men were not representative of the regiment, Smith takes care to explain, but "there were enough of them to give the impression that it had been recruited in Hades."

In Washington they were camped on Meridian Hill. The encampment was named "Camp Relief." To escape the heat and humidity of the city, President Lincoln made his summer residence at Soldiers Home, a great house with broad verandas, on a rise of ground at the foot of which was the camp. From whatever company of the 11th New York Cavalry happened to be in camp, the President's body-guard was chosen.

My father, as I have said, was nineteen years old when he enlisted. He was only twenty when he yielded to temptation and bought himself a fine pair of cavalry boots which he had seen for sale and coveted. The price was extravagant, but the boots were beautiful. Shortly afterward, he was on picket duty in front of the President's house. Mr. Lincoln was sitting on the veranda, reading a book, and my father was pacing back and forth with his carbine on his shoulder in front of the veranda. He was conscious that Mr. Lincoln was looking at him over his glasses, and he thought the President was admiring those boots. Finally Mr. Lincoln closed the book and came down the steps. My father brought his carbine to "present arms," and stood at attention.

"Young man, are those Government boots?" asked the President.

"No sir," replied my father.

"Where did you get them?"

"I bought them, sir."

"Well," observed the President, "don't you think, in times like these, a young man is very foolish to spend his money for boots when they are furnished him by the Government?"

"Well—yes sir," stammered my father, greatly chagrined and humiliated.

"I think so too," said the President; and turning, started up the steps. Then, pausing a second, he turned back and asked: "Young man, do you drink?"

"No sir, I do not."

Mr. Lincoln laid a hand on his shoulder. "Well, my boy," he said, "I guess it is much better to spend your money for a pair of good boots than it is to buy rotten liquor."

The President left his summer residence at nine o'clock every morning, escorted by his guard, and returned at four in the afternoon. Sometimes Mrs. Lincoln came back to the Soldiers Home with him and stayed two or three days. The men got considerable amusement out of her vigorous way of looking after her husband. Often the soldier stationed near the house would hear her admonishing him; and when the guard was relieved and returned to camp, he would tell his comrades: "Well, Uncle Abe is toeing the mark tonight."

There was a certain sign by which the guard knew if Mrs. Lincoln was in the house. If the President came out with his tie pointing every-which-way and as crooked as a cocked hat, they knew she was not there. But if the tie was neat and each end in its proper place, there was no doubt that she was on hand.

One morning the carriage and the guard drew up to the door as usual. My father was on the right of the first two following the carriage. The President came out and got into the carriage and the command was given: "Forward—March!" Just at that moment the air was pierced by a feminine voice:

"Abraham! Come in here!" The cortege halted; the President scrambled out and went into the house. As he passed, my father noticed that he had no tie on at all. Soon he re-appeared; and now the tie was in place and beautifully tied.

I am not one of those, however, who think Mrs. Lincoln was a tyrant, as some authors would have us believe. Perhaps, knowing her husband surely better than anyone else did,—his shortcomings as well as his many virtues,—she realized that sometimes the situation needed a firm hand.

The President objected very much to being closely guarded, and would get rid of his guard whenever he could; but he was always deeply interested in the men. In "The Story of a Cavalry Regiment" Thomas West Smith tells some anecdotes of this interest:



WILLIAM A. LANSING
ELEVENTH NEW YORK ("SCOTT'S 900") CAVALRY.

When the men of Scott's 900 got into camp in the evening, it was their custom to gather round the campfire and talk over the events of the day, including, of course, their grievances. Mr. Lincoln would come down near the edge of the camp and pace up and down as if in deep thought. Whenever he heard loud talking, he would send in and ask what the matter was. The men soon became aware of this, and when they thought they had been ill-treated they would talk the subject over in loud tones. Once the Quartermaster increased the price of clothing. Soldiers were allowed \$44 a year for clothing, and whatever they overdrew was deducted from the pay of \$13 a month. The price of overcoats was raised from \$9 to \$12; pants from \$3.60 to \$4, and so on. That evening the men around the campfire discussed the situation very earnestly—and very loudly. Mr. Lincoln was sitting on the veranda and they knew they would soon have his attention. Presently he left the veranda and came down and stood just outside the circle. Finally he called the sergeant out, who explained with great particularity. The President listened gravely.

"This is entirely wrong," he said; and went back to his place on the veranda. Next day the order was rescinded, as the soldiers had hoped.

On another occasion my father's tent-mate, Sergeant Clark Dodge (who had enlisted six days before he did and was four or five years older) drew two pairs of socks. They purported to be made of wool, but were really shoddy of the rankest sort. Sergeant Dodge put a pair on in the morning and was in the saddle all day. At night the stockings came off in strips with his heavy cavalry boots. The highly original remarks Sergeant Dodge let forth as he surveyed them were uttered in a voice audible for some distance. While he was cursing the loudest, the flap of the tent was pulled aside and the President put his head in.

"Sergeant," he said, "don't you think you are using rather strong language?"

"Well," cried Dodge, "it's enough to make a man swear!" and he held up the strips which were all that remained of the supposedly woolen socks.

Mr. Lincoln grasped the situation instantly. He asked if the Sergeant had another pair, and when they were handed to him he tore one of them into strips and took it and the whole one away with him. Next day he secured the names of the contractors who had furnished the socks and the inspector who had passed them. A fortnight later, strange as it may seem, Sergeant Dodge had the privilege of escorting these gentlemen on a little journey to Albany. They had been tried, convicted and sentenced to two years in the penitentiary.

It has been said that no man is a hero to his valet; but apparently the soldiers who were engaged in protecting Lincoln and were therefore close to him, held him in even greater reverence, if possible, than did the rest of the Army. I remember once asking my father: "What did President Lincoln look like?"

"Mr. Lincoln," was the reply, "was tall. He seemed all arms and legs. He was of swarthy complexion and had a high-pitched voice. He spoke quite rapidly. He had the saddest face of any man I ever saw; but when he smiled it was like the sun breaking through the clouds. Then he was radiant."

My next question was: "What did the men of your regiment think of him?"

"As far as I know," replied my father, "every man in Scott's 900 adored him." Father paused a minute, then, as he looked squarely in my eyes, said: "Son, Abraham Lincoln was a great man. He was a real man."

In February, 1864, the name of the regiment was changed to the 11th New York Cavalry; the regiment was taken in sailing vessels to New Orleans, where it became part of the Department of the Gulf, and from then to the close of the war it saw the toughest part of the campaign. My father was captured at Bolivar Heights in a battle with the 12th Virginia Confederate Cavalry. He killed one man and wounded another before he was taken. He was confined in Libby Prison; and he weighed 135 pounds when he entered, and 92 pounds when he finally was exchanged. He was discharged June 12, 1865.

Annual Print Exhibition; Section of Photography

THOMAS J. FISHER

The Annual Exhibition of Photographic Prints made by members of the Section of Photography (The Staten Island Camera Club) was opened with a reception on Sunday, January 16th. A total of 70 prints, including three color prints and six prints by members of the Junior Section were in the exhibition, which lasted until February 16th. In all, twenty members (one third of the total membership), displayed their prints. The Exhibition, an annual event, is held so that the public may see and enjoy the different subjects that strike the fancy of the individual in the pursuit of his photographic hobby. It also affords the print maker the opportunity of a special display.

The Staten Island Advance gave special note to the exhibition by an editorial pointing out that there is art in commonplace things, such as a coiled spring or the wheel of a locomotive. With the right lighting and the right angle, one may be as imaginative as any painter with a brush and palette. The more familiar scenes are not without appeal, especially during a snow storm, when only a real enthusiast would give thought to taking pictures. Photographic hobbyists must be lovers of life and the world about them, stated the editorial; they show what can be done with a lens, film . . . and imagination.

This is clearly illustrated by the photographs "Traffic Normal" and "On the Wing." It can often happen that falling snow, or fog, will hide barrenness or ugliness, leaving only sweeping line and faintly silhouetted trees and buildings for the hardy pictorialist who goes out in search of a means of interpreting a beautiful side of things that are often only dreary to the unseeing. And the artist of photography may spend hours on the end of a dock watching the flight of a gull, and probably enticing it closer with a morsel of fish, until just the right moment to catch the beauty of its soaring flight against a backdrop of blue sky and fleecy white clouds.



"TRAFFIC NORMAL"

Photograph by William D. Sullivan, from the Annual Exhibit of Photographic Prints.

Members of the Section serving on committees were:

Reception—Thomas J. Fisher, President; William D. Sullivan, Vice President; and William J. Hunn, Program Director.

Refreshments—Mrs. Maxine White and Mrs. Lucie Adams.

Prints—William D. Sullivan, William R. Flader, Herman Gluck and Jay Pelliconi.

Among visitors at the reception were: Director of the Institute Roswell S. Coles and Mrs. Coles; Victor H. Scales, Vice President



"ON THE WING"

Photograph by W. R. Flader, from the Annual Exhibit of Photographic Prints.

of the Photographic Society of America, and Vice President of the Metropolitan Camera Club Council; Mrs. Olga E. Irish, Member of the Oval Table Society, Fellow of the Royal Photographic Society and Associate of the Photographic Society of America, who also exhibited prints in the show; and Mrs. Mildred B. Scales, Executive Secretary of the Metropolitan Camera Club Council; all of whom with the exception of Mrs. Coles are Honorary Members of The Staten Island Camera Club.

Preliminary Investigation of Staten Island Natural Waters, Ponds, Springs, Streams and Wells

LEE ELLISON

Water plays so important a role in every life process that all students and investigators in the fields of natural science find a knowledge of the composition and qualities of natural waters closely related to their fields of study. By natural waters we mean streams, springs, shallow or deep wells, lakes and ponds other than those of a very transitory or run-off nature. Within the last thirty years the symbol "pH" has reached significance in every field of science, and in fact, in our very lives. The symbol pH, the chemist's expression for hydrogen ion concentration, is to chemistry what the Angstrom Unit is to light: as we define color no longer in terms of the six primary colors but in terms of wave length, so the expression of "acid" or "alkaline" now is qualified by its pH designation to signify the absolute degree of acidity or alkalinity. Absolutely pure water, neither acid nor alkaline in any sense, would have a pH of 7.0.

This subject of water analysis is related to many fields of study recently undertaken by naturalists associated with the Staten Island Museum: in the field of geology and in particular our local deposits of serpentine rock; in the study of diatoms, of plant ecology and of surviving reptilian life.

We would include as factors affecting the character and analysis of local natural waters, the nature of soil or rock with which it is in contact; deposits of vegetable matter and organic population in the water; amount of rainfall; atmospheric fumes; rate of flow in and out of the body of water.

The analyses covered by this report have been made over a period of twelve years, at different seasons and under different conditions. Only a few of the more unusual waters have been given systematic investigation on a monthly or shorter time basis.

This report, therefore, is in no sense complete—little more than a progress report—and pursuit of the subject has opened so many related fields of study that for purposes of clarity, this report must be limited to a study of results of some seventy pH measurements,

about twenty partial analyses and twenty or more complete analyses. By the latter term we mean a determination of the most significant radicals without time-consuming efforts at determination of rare or trace elements. For instance, titanium always accompanies silica to some extent, but to determine accurately the amount present would involve unwarranted amounts of time. We know that all the trace elements, such as boron, copper, zinc and molybdenum have effects on plant growth; we would look for them with better prospects of accurate determination in soil, rock or plant ash where the concentrations would be greater than in water.

Arranged in order of ascending pH values, the more significant Staten Island natural waters so far examined are listed below without reference to date, season or frequency of testing:

<i>pH</i>	<i>Name and Location</i>
4.0-4.5	Tysen's Pond, Ocean Terrace and Todt Hill Road.
4.3	"Stump Pond" near western edge of Dongan Hills Golf Course.
4.3	Bog, Dalemere Road, Reed's Valley.
4.4	Source of Sandy Brook, a birch swamp, Woodrow & Maguire Aves.
4.6	Source of Latourette Brook, Buck's Hollow.
4.7	West branch, Sandy Brook, Pleasant Plains.
5.0	Shallow well of Mr. Edkins, Cannon Ave., Travis.
5.1-5.2	Spring, Tallman St. between Harold & Holdridge Aves., Annadale Beach Park.
5.4	Swamp near old private drive, Buck's Hollow; source of western tributary of Dead Man's Brook (Sawmill Brook)
5.3-5.6	East branch Sandy Brook, Pleasant Plains.
5.9	Sawmill Brook, Buck's Hollow.
6.1	Jack's Pond, Great Kills.
6.2	Walker's Pond, Tonking Road, Egbertville.
6.2	Claypit bog near Sharrott Road, Charleston.
6.3	Swamp water, S. I. Edison Arthur Kill Plant, Travis.
6.3-6.5	Acme Pond, undeveloped part Wolfe's Pond Park, north of Hylan Blvd.
6.4-6.5	Sawmill Brook, Buck's Hollow, at confluence with Dead-man's Brook.
6.6-6.7	Spring near Goodhue Brook, Randall Manor.
6.6-6.8	Center of Basket Willow Swamp, Reed's Valley.
6.6-6.8	Pond St. Francis Seminary, Todt Hill Road.
6.7	Flagg's Pond, Manor Road. (now Lake Ohrbach)
6.7	Sharrott's Pond, Princes Bay.
6.7	"Bird Cabin Pond" north of Moravian Cemetery.
6.8	Ditch draining old clay pit, Chemical Lane, Rossville.

6.9	Richmond Brook at St. Andrews Church, Richmond.
7.0	Vreeland's Brook, Travis Ave.
7.0	Stagnant Pool back of Charleston Reformed Church.
7.1	Outlet Basket Willow Swamp, Reed's Valley.
7.1	"Boiling Spring", Bement Ave.
7.1-7.2	Ft. Latourette spring, Old Mill Road, Richmond.
7.1-7.3	Dead Man's Brook, Buck's Hollow.
7.2	Willow Brook at Signs Road.
7.3-7.4	Artesian flow from standpipe, abandoned pumping station, Travis Ave. New Springville.
7.3-7.4	Reed's Valley Brook at Dalemere Road.
7.4	Stream, Winant's Swamp, Travis Ave.
7.4	"Mineral Spring" (?) Winant Swamp, Travis Ave.
7.4	New Springville Brook at Rockland Ave.
7.5	Brook draining Martling's Pond.
7.5	Willow Brook at Woolley Ave.
7.6	Killfish Brook, Huguenot Ave. & Arthur Kill Road.
7.6	Spring below Lighthouse, Richmond.
7.8-8.2	Corson's Brook, Willowbrook Park.
8.0	Sweet Brook at Richmond Ave. Eltingville.
8.1	Goodhue Brook Randall Manor.
8.2-8.4	Logan's Spring Brook, Livingston.
8.4	Well, Blue-White Laundry, Post Ave., West New Brighton.
9.0	Piped spring near Victory Blvd. in front of Sunnyside Pumping Station.
9.8-10.0	Flowing artesian standpipe back of old pumping station, Sunnyside.

Note: Names of streams, ponds, etc. are from Wm. T. Davis' paper "Ye Olde Names and Nicknames" and from present-day local terms.

Before making any general statements concerning the above findings, it is best to consider the complete analyses herewith tabulated:

	Tyzen's Pond	Log, Dale- mere Rd.	Spring, Tall- man St. Anna- dale Beach	E. Branch Sandy Bk. Pleas. Pl.	Acme Pond N. of Hylan Blvd.
pH	4.3	4.3	5.1-5.2	5.7	6.3-6.4
Hardness	36		58	57	
NaCl	1.0	10.9	8.3	14.0	14.4
SiO ₂	1.5	12.3	14.4	7.0	5.8
R ₂ O ₃	1.1	2.3	0.36	2.0	1.0
CaO	9.5	11.0	17.2	21.0	20.0
MgO	6.6	6.5	7.6	9.6	7.1
MnO	1.96	trace	trace	trace	not det.
K ₂ O	5.3		1.4	1.3	
Na ₂ O	8.7		13.8	9.9	
Free CO ₂	11.0	13.0	53.0	5.0	5.0
Combined CO ₂	5.3	3.1	7.9	14.5	6.3
Sulphate radical					
SO ₃	26.4	18.4	39.2	41.3	37.6
Nitrate N	2.0			0.6	
Total solids	61.6	111.1	107.0	not det.	116.7

	Flagg's Pond	Vreeland's Brook	"Boiling Spring"	Ft. Latour- ette Spr.	"Mineral spg. Winant Sw. Travis
pH	6.7	7.0	7.1	7.1-7.2	7.3-7.4
Hardness	62	178	296	196	134
NaCl	14	26	25.2	12	50
SiO ₂	2.2	1.1	24.6	8.7	10.5
R ₂ O ₃	2.9	7.1	1.3	5.9	2.1
CaO	7.8	41.8	24.8	14.4	57.5
MgO	6.3	18.0	56.5	53.4	18.0
Free CO ₂	(not determined)		14.0	12.0	13.2
Combined CO ₂	4.4	26.0	26.5	45.8	57.6
Sulphate radical SO ₃	22.6	49.4	47.8	36.8	15.6
Total solids	72.7	286.4	249.2	288.0	227.0

	Artesian, Travis Ave.	Stream, Winant Swamp	Piped spring, Sunnyside	Artesian pipe Sunnyside
pH	7.4	7.4	9.0	9.8
Hardness	not det.	172	not det.	138
NaCl	79.0	50.0	13.0	22.0
SiO ₂	16.2	18.4	2.0	0.5
R ₂ O ₃	2.3	1.0	1.0	1.2
CaO	29.8	61.5	8.5	2.2
MgO	17.8	16.3	41.3	48.2
Free CO ₂		2.0		
Combined CO ₂	14.8	52.4	47.7	78.7
K ₂ O	(not determined)		1.0	1.4
Na ₂ O	(not determined)		9.9	6.4
MnO	(not determined)		trace	trace
Sulphate radical SO ₃	46.0	39.7	0.7	0.3
Nitrate N	not det.	not det.	5.6	0.5
Total solids	219.7	268.4	89.9	102.1

All results except pH are expressed in parts per million. Names of sample localities refer back to list of pH determinations for more exact location. Chlorine has been expressed as NaCl sodium chloride, although it is not known if all chlorine present is combined with sodium. Some may be combined with magnesium.

From the above list it will be seen that the two radical exceptions at the extremes of the pH range are Tysen's Pond and the artesian standpipe at Sunnyside. These are worthy of more detailed discussion.

Tysen's Pond. Here is a unique pond surely resting upon serpentine rock although its bed may be of silt and leaf mold. This coming spring, investigations will be undertaken to learn the depth of water and of silt in this pond. Samples of this water were taken

each month from the fall of 1947 to the fall of 1948. There is about this pond no odor of stagnant water, yet there is no visible inlet or outlet. Elevations surrounding it do not exceed fifteen feet above lake level. The pond has never been known to completely dry up. It supports only one aquatic plant, a floating mat of the moss *Sphagnum cuspidatum*. The diatom *Frustulia saxonica* is the only diatom found here thus far, and is unknown elsewhere on the Island in fresh waters.

The level of this pond is apparently maintained by rainwater seeping through the soil of its shallow watershed. The pond is entirely surrounded by sweet gum trees and almost no other leaves blow into it. Some of these sweet gum leaves, blackened but not decomposed, were removed from the pond, washed several times with distilled water, placed in distilled water and allowed to stand for two weeks. This water then had a pH of 4.0. Sweet gum leaves from Annadale were similarly soaked, with similar results, and a separate portion was burned to an ash and analyzed. Water from Tysen's Pond has always shown an appreciable amount of manganese oxide. Ash of the sweet gum leaves from Annadale showed 2.27% of this radical and the soaked leaves from Tysen's Pond showed 0.26%. We must conclude, therefore, that the unusual character of water in this pond, different from that of nearby ponds, is due to decomposition of the leaves of the surrounding sweet gum trees. The sphagnum moss is more of a "fellow traveler" than a causative agent, though its growth probably helps maintain a comparatively constant pH as well as to afford conditions hostile to growth of offensive or discoloring algae. The principal alga found in the pond thus far, is the desmid *Staurostrum hystrix*. Clearly, this pond deserves a great deal more investigation from all angles. Its case alone has opened up the need for four lines of investigation: depth of our ponds and character of their beds; composition and acidity of dead leaves of different species; mold and bacterial action on surfaces of dead leaves; acidity of rainwater and the related subject of atmospheric or industrial fumes.

Artesian Water from Abandoned Well, Sunnyside. Many years ago, during a time when the Island received its water supply from local sources only, several wells were driven on the edge of a marsh along the present Ontario Street at Sunnyside. As shown by the analyses, the water from two of the freely flowing sources is remarkable for natural waters in this part of the country. The first sample, taken from a horizontal pipe apparently communicating

with a spring or buried standpipe, near Victory Boulevard, is remarkably alkaline in its pH of 9.0 but not entirely devoid of algal life. Mr. I. C. G. Cooper has found dwarfed forms of *Stigeoclonium nanum* present. The second sample, from an old uncapped pipe back of the abandoned pump building, is so alkaline as to be noticeable to the taste. It appears to be barren of all organisms. It was noted in studying the analysis of this last sample, that if calcium and magnesium oxide are computed to their equivalents of CO_2 in the assumption that these radicals are both present as carbonates, (and to a slight extent as bicarbonates), this would take care of approximately all the combined CO_2 found in the analysis. The water from this artesian well becomes milky immediately upon coming to a boil. Saturated magnesium carbonate solution has a pH of 9.7-9.8 which is nearly that found as the pH value of the freshly drawn water from this well. We must conclude that this pipe, which goes to a depth of over three hundred feet, taps a supply of water in which dissolved CO_2 acts upon serpentine minerals (or brucite).

Tests have been made on several of these samples for the presence of fluorine. Tests thus far have been indefinite, and further work is planned in search for this element, requiring the handling of large samples of water. It is not very probable that more than spectroscopic traces of the element will be found, but decision awaits further work.

In studying the above analyses, (which are merely representative selections from a larger list of analyses), and of the pH readings, we seek to relate pH, hardness, and magnesium oxide to contact with serpentine rocks or soil presumably containing decomposed serpentine. From pH 4.0 to 7.0 we can discover no relation: there are quite as many low pH waters in serpentine regions as in non-serpentine areas. Above pH 7.0, with three exceptions out of twenty determinations, all the samples examined are from sections of the Island associated in some way with serpentine rock, with high values of magnesium oxide and silica, the principal component radicals of the mineral serpentine. Two of the exceptions, the spring and the stream in Winant's Swamp on the south of Travis Avenue near Main Creek, are presumably in contact with alluvial and morainal soil and an ancient outwash from the serpentine ridge of Richmond Hill. The other exception, Killifish Brook, a subject for further study, may derive its alkalinity from kaolin-like deposits which appear in the streambed.

Below pH 7.0 or absolute neutrality, the variable factors governing acidity appear to be rate of flow and accumulations of leaf mold or vegetable matter, or density of aquatic organism population. It will be noted that all the ponds, swamps, woodland brooks and sluggish bogs fall in the group of pH below 7.0 except one claypit bog. All waters above pH 7.0 up to the remarkably high alkalinities of deep well water, are streams or springs of rapid flow.

To shed further light on this entire study, it is planned in the future to make analyses from comparable sources, of natural waters in localities outside of Staten Island, and to relate the findings to those covered by investigation of our local waters.

“Take Any Spot on Staten Island—”

by WARREN F. ROBINSON

Take any spot on Staten Island, let any painter really look, tune his senses, and open his sketchbook, and—*there* will be something to stir the emotions and to record in terms of color, form, line, tone, texture, and space; the language of painters since the days of the first cavemen!

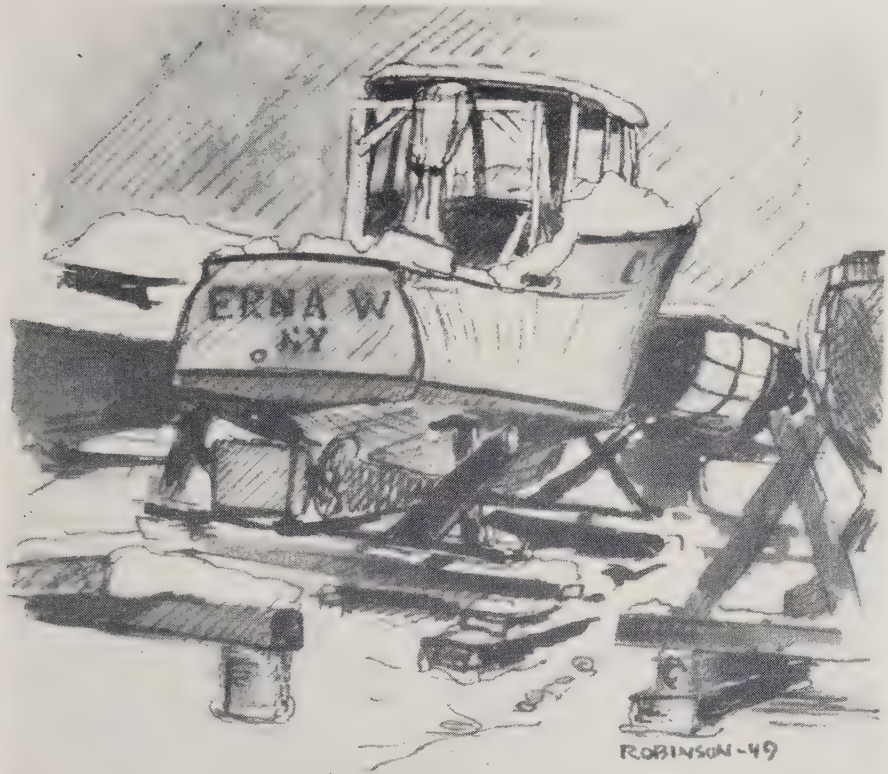
Apparently there is not a spot on this wonderful Island devoid of interest in terms of pen, pencil, or brush. People and their homes, bridges, roads, ferries and shipping, fields, woods, and glimmering ponds—all sketched and painted a thousand times by others but all fascinating to a newcomer. What to say, what to leave unsaid, in writing about such a heap of treasures? The tow-headed youngster, penny in fist, before a counter covered with delicious candies never had a harder choice to make!

So one day, recently, the painter decided to get on a bus, *any* bus, ride for a while, and then get off, expecting an adventure in sketching at the stop. He just happened to get on a 103 bus at St. George. The day was cold, snow on the ground, the wind blowing. He chose to get off at Great Kills. Sketchbook under arm, like a character in one of Melville's yarns, he “gravitated” towards the boat-basin. All his senses were alert for the intangibles which help one decide what to sketch. The spot was already familiar to him though always fresh and new.

Canvas-wrapped hulls proved most attractive. A score of fascinating names caught the eye—“Sea Scamp,” “Hobo,” “Melba,” and others. Colors—blues, greens, all kinds of reds, differing whites stirred the emotions. Masts and rigging like lines against the sky. The textures of snow, wooden hulls, metal parts. The forms—bulbous hulls, sleek-lined beauties, box-like house-boats. Space—in and around the forms, space filled with fresh, moving air! And the thousands of tones from light to the deepest shade.

Then it happened!

His eyes rested upon, and his senses stirred to, *one* boat in its cradle among all the other boats in theirs. Nothing pretentious,



"ONE BOAT AMONG ALL THE OTHER BOATS."

Sketch by Warren F. Robinson, Head of Art Department, Wagner College.

nothing chic, just plain boat, with what boatmen call "a nice clean run to her."

The painter sat down, after brushing the snow off a suitable chunk of wood and, for a while, "looked with all his senses" at the boat. His eyes saw certain things and they and his past experiences told him how the wood would feel beneath the fingers, what the nostrils would say about the smells of oil, paint, and cordage. And there was also the chilling temperature which must somehow be recorded in the sketch.

Then rapidly he sketched, looking more at the boat than at his paper, trying to stress *not what the eyes alone saw* but how tones and lines might truthfully record what he *knew* to be true about the "Erna W." There must be something of the weight of the boat in the sketch. There was a canvas draped over the motor-well. He could not see the motor but it helped make the weight and he thought about it even though it could not be seen, as he sketched.

Just as the sketch neared completion, a tall, thin man with a weather-marked face came along, walked in among the boats and climbed aboard the "Erna W." He bent over the motor. The painter walked up to the boat and diffidently showed his sketch to the owner. Mr. Alfred Harvey approved the sketch as being "a pretty good drawing."

Mr. Harvey had a friendly smile and fine, clear eyes. Rembrandt would have certainly done a dozen sketches of him. Sighing, the painter realized he himself was definitely no Rembrandt! The owner of the "Erna W." said he used her for offshore fishing, had had a couple of bearings act up last fall, and was overhauling the motor now. He hoped to get her overboard again late in April. He invited the painter to come on a trip some day.

Afterwards, his head full of visions of pulsing waves alight with sunshine, of gulls hovering over the wake—all the exciting world of the sea and of boats to be caught in a sketchbook—the painter walked back to the highway and the bus.

Take any spot on Staten Island, let any painter really "look" with all his senses and an open sketchbook and—*there* will be adventures to warm the heart and to be "spoken" in the language of painters since time began.

History of the S. S. White Dental Manufacturing Company

JAMES M. TALBOT

To Staten Islanders the story of the establishment of the plant of The S. S. White Dental Manufacturing Company at Prince Bay may be of some interest, as well as importance. To visitors it is always a surprise how a large manufacturing plant came to be established at such a location.

Samuel Stockton White was a Philadelphia dentist, who was born in 1822. He lived fifty-seven years, practiced his profession and established a manufacturing business. Two years after his death his executors agreed to form a stock company under the laws of the State of Pennsylvania, and merged with a firm in New York, the Johnston Brothers, who had a small plant at Prince Bay, Staten Island.

The history of the original buildings is a little vague, but the story is that in 1860 a plant was erected by Joseph H. Seguine, Stephen Seguine, Isaac K. Jessup and a Major Bennett to extract oil from palm olive nuts. The effort failed. The Seguines turned to candle making, built a dock into the Bay and shipped candles to New York via the schooner "Adamantine,"—Bastian LaForge of Pleasant Plains, Captain. Later, agents of William M. Tweed made tile at the Seguine factory, and still later a Mr. Middleton made bullets there.

In 1865 the site and the four small buildings were purchased by Algernon K. Johnston, after reading an advertisement of a factory for sale at Prince Bay. In 1876 it became the Johnston Bros. Manufacturing Plant for dental chairs, engines and dental supplies. When the consolidation above mentioned took place in 1881, the momentous decision was made to continue manufacturing in Staten Island and to make this plant the main plant of the company. Such a decision seems strange even now, because of the isolated location and the inaccessibility at that time. It was a tribute to the type of individuals who were operating here, a recognition of their superior manufacturing abilities and a desire to make use of them for the betterment of the new company. Such men as William A. Johnston, whose organizing and executive ability and whose far-seeing judgment were outstanding and



AERIAL VIEW OF PLANT OF S.S. WHITE DENTAL WORKS,

Arthur W. Browne, a mechanical genius who developed many remarkable machines for automatic production and designed such products as dental chairs, instruments, etc.

That the faith of the founders was justified is attested by the many developments which have taken place at the Prince Bay factory over nearly seventy years. During that period the science of dentistry has grown up. From a point where it could hardly be called a profession, dentistry is now accepted and practiced as a humanitarian aid, second only to medicine. It has its various specializations, such as periodontia, orthodontia, exodontia, radio-dontia and prosthodontia. It has developed techniques requiring the highest of skills and experience. It has introduced various agents for local and general anaesthetics. All sorts of products such as artificial teeth, dentures, filling materials, and precious metals have gone through many stages of development. The old fashioned office with its upholstered chairs, bedecked with tassels and curved iron decorations, has given place to the modern well lighted, clean operating room with chairs and units of simple lines, X-Ray machines and cabinets and the spotlessly dressed dentist and assistant.

In all of this growth The S. S. White Dental Mfg. Co. at its Prince Bay Plant has played an important part. Many of the innovations have been developed here. The factory itself has grown in keeping with the profession, in its building, its equipment, and its methods of manufacture. Here we find a variety of products, probably as versatile a line as found in any factory in the country. For here are made the dental chairs, both foot operated and motor driven, the so-called units embodying the dental engine, the hand-pieces which hold the instruments, the spittoon, the various syringes, hot and cold water, etc., etc. Here also we see the production of dental burs, those little drills which cause some anxiety when used. The manufacture of this item is in itself an industry, employing 100 or more persons and producing millions of burs a year. Here also are produced various types of filling material, porcelain, amalgam and gold. The manufacture and bottling of Nitrous Oxide for anaesthesia was started in the plant many years ago and has been developed to a remarkable degree, not alone as an anaesthetic but in the household use of whipping cream. A trip through the plant discloses a modern iron foundry where all castings used in the factory are produced, a modern Machine Shop with up to the minute machinery, and assembly lines where chairs and units with their thousand parts come along at regular rates.

An interesting department is one in which flexible shafting is produced, an article originating in the old dental foot engine, but now an industrial product with a thousand uses. You know it best as the little shaft which drives your speedometer and which is produced with automatic machines at the rate of a million feet a week. Many of the products of the factory are used in industry, so that dentistry does not demand the entire attention of the factory organization. This was especially true during the war when the airplane industry required the use of our equipment and engineering skill in producing controls of various kinds in tremendous quantities. One of the products also manufactured at that time was bullets, a throwback to the old Civil War days.

Space does not permit an enumeration of the many interesting operations which take place at the factory. The office alone, with its calculating machines, its card punchers, automatic adding, multiplying and tabulating devices is a fascinating place. The watch word of the organization is modernization and every effort is being made to insure the finest product for the trade at reasonable prices. To this end the work of the entire organization of 1000 is dedicated, an organization composed of the highest type of people, natives of Staten Island, particularly of the nearby towns, who have entered and grown up in the organization.

A few of the products of the factory, illustrating modern equipment, have been placed on display at the Staten Island Museum, side by side with some of the primitive apparatus of a dentist's office. The exhibit will be shown for six months, beginning April 10.

Editor's Note: The Company uses the name "Prince Bay" as official designation for its location; and it is correct in doing so, according to the Staten Island zone-book issued by the post office. No local historian, however, could possibly let slip such an opportunity to point out that the "baptismal name," so to speak, is "Prince's Bay." That form was used in letters from Lord Stirling to General Sullivan in 1777 (Sullivan Papers, 1, 401); and in a record of sale of lands of Col. Christopher Billopp in 1784 (Morris I, 142) and maps of 1779, 1797 and others (Morris I, 375). A map in possession of the Staten Island Museum, published about 1856, shows "Prince's Light." A map used as frontispiece in Bayles History of Richmond County shows "Princess Bay," which according to Morris (I, 357), is a copy of a chart of the U.S. Coast

and Geodetic Survey; but a few pages later Bayles inserts another full-page map, published by N. L. Britton, who was undoubtedly a better authority on local names than the Coast and Geodetic Survey, and this shows "Prince's Bay." And Bayles uses "Prince's Bay" throughout his text.

In "Staten Island Old Names and Nicknames," compiled by the late William T. Davis in 1896 from the memories and inherited usages of old residents, it is "Prince's Bay;" and Leng and Davis ("Staten Island and Its People,") carefully uses "Prince's Bay" throughout, thus bringing it down to the present.

Nevertheless, the name-board at the S.I.R.T. station shows "Princess Bay," and now the post office zone-book, as has been said, supports "Prince Bay."

Annual Spring Exhibition

JEAN LEASON

The Annual Spring Exhibition by Staten Island Artists was opened on Sunday, April 10 by Mr. James M. Talbot, Vice-President of The S. S. White Dental Manufacturing Company. Seventy-eight artists are represented by one hundred and eight paintings and one piece of sculpture. The number of pictures submitted for this exhibition is steadily increasing and a greater effort is being shown by the artists submitting work to improve the standard of the work submitted. The following is a list of the artists and their work in this exhibition:

My Road	<i>Richard F. Allen, Jr.</i>
Old Homestead in Winter.....	<i>Albert Barbelle</i>
Seashells	<i>Albert Barbelle</i>
Old House, South Yarmouth, Cape Cod.....	<i>Henrietta Beaumont</i>
Harold Klinger	<i>Ely M. Behar</i>
Mrs. Theo Wilbur.....	<i>Ely M. Behar</i>
Winter Sunday	<i>Leslie Bissell</i>
Tranquillity, Prince's Bay.....	<i>Harry D. Bourne</i>
Ronnie	<i>Janet Bruns</i>
Judith	<i>Janet Bruns</i>
Ruth Was There.....	<i>F. A. Busing</i>
Quiet Please	<i>F. A. Busing</i>
Lackawaxen	<i>Le Roy Busing</i>
Swiss Hill	<i>Le Roy Busing</i>
Portrait—Mary Frances Reade.....	<i>Alice Canady</i>
Springtime	<i>Alice Canady</i>
Fred	<i>Harold Chambers</i>
Blow Wind Blow.....	<i>Lawrence Cianchetta</i>
Forgotten Farmhouse	<i>Aubrey Combs</i>
St. Andrew's at Night.....	<i>Aubrey Combs</i>
My Brother's Chicken Coop.....	<i>Joseph Contessa</i>
Wind on S. I. Hill.....	<i>Joseph Contessa</i>
The Shop	<i>Sally Conway</i>
Peter Martling Homestead.....	<i>Ida Dudley Dale</i>
Mission of San Juan Capistrano, California.....	<i>Frederick S. Deppe</i>
Still Life	<i>James Di Crocco</i>
The Earthenware Jug.....	<i>James Di Crocco</i>
Still Life	<i>Marguerite Di Crocco</i>
Vermont Syrup Jug With Flowers.....	<i>Marguerite Di Crocco</i>
Bus Stop, Richmond.....	<i>Ethel Easley</i>
Flower Study	<i>Ethel Easley</i>
Still Life	<i>Amelie Elkind</i>

**"PIERS IN THE SNOW"**

Gouache by Cecil C. Bell

A Camel-back	Christian E. Everson
A Pastoral Scene.....	Ferdinand O. Fingado
Roses	Maria Garrett
Potfull of Springtime.....	Lola Landry Gerow
Glace of Queen Anne's Lace.....	Lillian W. Gilfillan
Midnight Sun	Lillian W. Gilfillan
Practice	Patricia Greene
Reflections	Hans Glinicke
Sunny Morning	Hans Glinicke
Sunset Glow	Samilla J. Heinzman
Time to Relax.....	Robert H. Hitch
Heritage	Mary T. Howe
Edgartown	William Jackson
Richmond Terrace	William Jackson
Dad	James Johnson
Delaware Indian	William Johnston
Still Life	William Johnston
Dew Bouquet	Stanley Jorgensen
Things	Stanley Jorgensen
Docking	Lyman E. Kelley
An Old Fashioned Home.....	John Koestner
Negress With Red Hair.....	Etta Konovits
Patches of Color.....	Etta Konovits
A Shell	Valerie Korniloff
Midland Beach	Valerie Korniloff
Self Portrait	Leonora La Rocca

Mexicana	<i>Isabel Leason</i>
Oriental	<i>Isabel Leason</i>
Portrait	<i>Jean Leason</i>
A Lesson in Herpetology.....	<i>Percy Leason</i>
Still Life	<i>Percy Leason</i>
Daffodils	<i>Ethel C. McDonnell</i>
New York Skyline.....	<i>Ethel C. McDonnell</i>
Dunham's "Fishing Chips".....	<i>Alfred McNamara</i>
The Stone House	<i>Alfred McNamara</i>
Student Days of Old	<i>Eleanor E. Marshall</i>
Full Sail	<i>Alice F. Martin</i>
Returning Fisherman	<i>John Matejeck</i>
Still Life	<i>Winifred Montfort</i>
A Barn	<i>Thomas F. Morris</i>
Reflections	<i>Thomas F. Morris</i>
Baby	<i>Amalie E. Neumann</i>
Zinnias	<i>Amalie E. Neumann</i>
Bouquet	<i>Elizabeth Nugent</i>
Porcelain Madonna	<i>Elizabeth Nugent</i>
Old Creek	<i>Joseph Nugent</i>
Old House at Little Ferry.....	<i>James R. O'Brien</i>
Still Life	<i>Laura Orrico</i>
Liesje	<i>Alice G. Rietmeyer</i>
The Titans	<i>Sarah Rivkin</i>
View of Prince's Bay.....	<i>Warren F. Robinson</i>
Chrysanthemums	<i>Katherine Rodriguez</i>
South Shore Hillside.....	<i>Margaret Rue</i>
Chrysanthemums	<i>Margaret Rue</i>
Brixham Fishing Boat.....	<i>Juan Schlatter</i>
Elbe Pilot Boat.....	<i>Juan Schlatter</i>
Mums	<i>Edythe W. Scott</i>
Wistful Wishing	<i>Edythe W. Scott</i>
Somber Mood	<i>Katharine B. Seeley</i>
Still Life	<i>Elizabeth Leah Sherman</i>
Abe	<i>Seymour Sherman</i>
The Farmer's Wife.....	<i>Violet Siemering</i>
Pine Boughs	<i>Isabel Grinnell Simons</i>
Sunflowers	<i>Frederick A. Sklenar</i>
Contrast	<i>Don P. Smoot</i>
Sculptured Head	<i>Lee Szabo</i>
Landscape	<i>Ester Dahl Tellefsen</i>
Roses	<i>Ester Dahl Tellefsen</i>
Flagg's Pond	<i>Omon Van Dyck</i>
Floral Study	<i>Veronica Von Zangenberg</i>
Still Life	<i>Veronica Von Zangenberg</i>
Jimmy Estey's Diner.....	<i>Frederick Whitaker</i>

Lady Aloof	<i>Frederick Whitaker</i>
Mrs. George A. Porter.....	<i>Theodora Wilbur</i>
Garden and Wayside Flowers.....	<i>Emma L. White</i>
Forge	<i>Agatha Bell</i>
Piers in the Snow, Staten Island.....	<i>Cecil Bell</i>

The Executive Committee of the Section of Art served as a jury of selection for this show.

"Crafts For All Ages"

The Museum's exhibition of "Crafts for All Ages" opened Sunday afternoon, March 6, with a reception at which the attendance topped considerably our previous record of 600 and emphasized afresh the desperate need for a new building with space to permit visitors at least to see what they came to see. Mrs. Rose Walsh, Assistant Chief of the Recreation Division of the New York City Housing Authority, was the principal speaker.

Displays ranged from hooked rugs to ironwork, and included hand painted china, figurines and tapestries, vitreous enamel, silver and copper jewelry, hand weaving, Oriental rugs, inlaid wood, embroidery, papercraft, leather and metal work, shell crafts, paintings and plaster figures. During the afternoon Mrs. Margreta Ohberg demonstrated the process of spinning with an old-fashioned wheel loaned by the Staten Island Historical Society. Other demonstrations were given by Mrs. Joseph Giro and four of her students, in Oriental rug-making; Mrs. Helen Friedman, silk screen reproduction; and Mrs. Sylvia Pedersen, silver and copper jewelry.

The exhibition was arranged by Miss Jean Leason, curator of art, assisted by Mrs. Katherine Renfield, Mrs. Ester Dahl Tellefsen and Miss A. T. Regine. Miss Leason opened the exhibition and the Director spoke briefly on the work of the Museum.

Institute Notes

Annual Meeting. The Annual Meeting of the Staten Island Institute of Arts and Sciences will be held on Saturday, May 21 at McKee High School, starting at 8:15 P.M. The program will be a William T. Davis Memorial Lecture, "Amazon Jungle Tribes" by Lewis Cotlow, illustrated by colored motion pictures. Because of the limited capacity of the auditorium, admission will be by ticket only. These will be mailed to members with the regular announcement of the meeting.

Exhibitions. Announcements of The S. S. White Dental Manufacturing Co. exhibition, arranged by Mr. Mathewson, and the Annual Exhibition of work by Staten Island artists, arranged by Miss Leason, have been made elsewhere in this issue of the *Proceedings*. Mr. James M. Talbot, Vice President of The S. S. White Dental Manufacturing Co. opened the exhibitions at a reception on Sunday, April 10 from 3 to 5 P.M.

The Annual Exhibition of Microscopical Objects sponsored by the Staten Island Microscopical Society will be held in the Staten Island Day School on Saturday, April 30 from 8 to 10 P.M. This annual event is made possible by the cooperation of Island schools, colleges and institutions which teach or use the microscope and visitors are welcome.

Annual Card Party. The annual card party given by the Woman's Auxiliary will be held this year on Tuesday, May 3 at the C.Y.O. center in Port Richmond. This is the one big social event of the year and you are urged to take part.

Accessions

Since our report in the January *Proceedings*, several interesting accessions have been added to the Museum. Important among these is a set of deeds, correspondence and other papers showing ownership of a large tract on Grymes Hill back to 1836, the gift of Mr. John H. Gans. Another accession of local historic interest, the gift of Miss Marguerite Bechtel, is the certificate of appointment of G. J. Bechtel as Consul-General for the United States of the

Dukedom of Brunswick and Luneburg, signed by Abraham Lincoln. Dr. Orrin Sage Wightman, FRPS, presented a large portrait of our President, Dr. James P. Chapin. Other donors were: Willis A. Boughton, Mrs. S. Adolphus Knopf, Mrs. Thomas D. Toy, Charles Ericson and Dr. H. G. Steinmeyer.

Membership

We welcome the following who have become members between the publication of our last *Proceedings* and March 10, 1949. Mr. and Mrs. Arnold Bowie, Mrs. Mary Jane Bowles, H. Cleaver Brown, Mrs. Helen Cowan, George Curry, Miss Vita DeMarca, Frederick S. Deppe, James DiCrocco, Miss Marguerite DiCrocco, Dr. Amelie Elkind, Mrs. Ferdinand Fingado, Miss Ethel G. Fowler, Mrs. Tom Garrett, Mr. and Mrs. William E. Greenleaf, Frederick G. Holte, Miss Elizabeth Johnson, Walter Kuhn, George Maki, Mrs. John Malcolm, James McCallion, Mrs. W. N. Meyer, Mrs. W. J. Montfort, Mrs. Joseph Neumann, Mrs. Wilhelmina J. Nielsen, Miss Laura Orrico, Mrs. Karl Pauli, Mrs. Jacob Radinsky, Mrs. E. J. Reichenbach, Mrs. Hendrik Reitmeyer, Mrs. E. D. Scala, Richard G. Schweizer, Miss Amy V. Simmons, Don P. Smoot, Fred Stoutland, Miss Marie Sutura, Mrs. Matilda Veeck, Miss Annie Weingartner, Ernest H. Williams, Miss J. R. Von Zangenberg, Carl M. J. Von Zielinski, Jr.

This is a gratifying addition to our membership, and we trust that in our next *Proceedings* we shall be able to report a still longer list. The Museum needs to increase its membership so that there may be a larger participation in the services it renders to the community and also for the very practical reason that additional income is needed to maintain and increase those services. To this end a Membership Committee has been set up, of which Mr. Manuel Johnson is the experienced and enthusiastic Chairman. The activities of this committee are already producing results and our hopes are high for important advances as its work gets under way.

Necrology

Miss Elvira Methfessel. Miss Methfessel, a loyal member since 1921, died February 6, after a long illness. She was the daughter of Anton G. Methfessel, founder of the Methfessel School and Edgewater Institute, both on the East Shore, which later became

the Staten Island Academy and Latin School, today known as the Staten Island Day School. Her mother, Mrs. Laura A. Methfessel, was the daughter of John A. Roebling, the bridge builder. Miss Methfessel was born on the Island, but travelled extensively both in the United States and in Europe and studied art in Dresden, Germany.

Theodore H. Spratt. Mr. Spratt became a member in 1907 and served as Trustee from 1925 to 1928. At the time of his retirement, three years ago, he was Vice-president of the Corn Exchange Bank and Trust Company, with which he had been connected for forty-four years. He had been active in civic affairs and community organizations, including the Chamber of Commerce, the Red Cross, Boy Scouts, Rotary Club, Staten Island Hospital and other organizations. He was presented by Mayor LaGuardia with a citation for civic service in 1938 and in 1941 was given the George William Curtis award for Citizenship. Mr. Spratt died March 7.

Mrs. Daniel D. Feldman. Mrs. Feldman, a member since 1925, took an active part in community affairs. She was the widow of Daniel D. Feldman, principal of Curtis High School from 1913 until his death in 1924. For many years she was a member of the Staten Island Woman's Club, the Unitarian Women's Alliance, and was a past president of the Fortnightly Club and past regent of the Richmond County Chapter, Daughters of the American Revolution. Mrs. Feldman died March 8 after a long illness.

Miss Emelia Joan Schneider, a member of the Belles Lettres Society, the Fortnightly Club, and honorary member of the Staten Island Woman's Club, died February 23 in her home on Ward Hill, after a long illness. Miss Schneider was a successful actress for many years, and later became a dramatic coach, teaching dramatics at Wagner College and directing many amateur productions. She was deeply interested in the condition of the American Indians, and spent one entire summer with the Penobscot Indians of Maine, learning their customs.

PROCEEDINGS of the
STATEN ISLAND INSTITUTE
of ARTS and SCIENCES



ANNUAL
REPORTS

VOLUME XI

NUMBER 4

July, 1949

THE PRESIDENT'S MESSAGE

These Annual Reports mark the completion of 67 years of service to Staten Island and to the City of New York of which our Island is a part. You will read in them the results of a wide variety of activities relating to the "Arts, Sciences, and History, particularly as they relate to Staten Island," all made possible by the use of private capital working in harmony with City funds.

The Institute of Arts and Sciences is truly a cooperative enterprise involving many hundreds of individuals from Mayor William O'Dwyer and Commissioner of Parks Robert Moses, as representatives of the City Government, to the members who have served willingly in a variety of not always pleasant tasks to promote our splendid program. To all of you who have helped we extend our hearty thanks.

JAMES P. CHAPIN



**Oil Painting of
HAROLD KLINGER**

By ELY BEHAR

Winner of \$25. award for most popular
painting in Annual Spring Exhibition.

STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES

July 1, 1949

Officers

<i>President</i>	Dr. James P. Chapin
<i>First Vice-President</i>	Dr. Frank A. Strauss
<i>Second Vice-President</i>	Edna L. Hoffmeyer*
<i>Treasurer</i>	Robert M. Leng
<i>Secretary</i>	Roswell S. Coles

Board of Trustees

Terms Expire 1950

Andrew M. Anderson	Mildred S. Grimes
Viola M. Carew	Edward L. Love
Edward G. Baker	Edward M. Stothers
Daniel L. Bridgman	

Terms Expire 1951

Dr. James P. Chapin	Robert M. Leng
Howard H. Cleaves	James J. Mallen
Manuel J. Johnson	Loring McMillen
Frederick H. Zurmuhlen, Jr.	

Terms Expire 1952

Joseph F. Burke	Alfred Shriver
Edna L. Hoffmeyer*	Cornelius G. Kolff
Lee A. Ellison [‡]	Joseph A. Palma
Dr. Frank A. Strauss	

* Deceased June 17, 1949.

Ex-Officio Members

The Mayor of the City of New York

HON. WILLIAM O'DWYER

The Commissioner of Parks

HON. ROBERT MOSES

The President of the Borough of Richmond

HON. CORNELIUS A. HALL

*The Assistant Superintendent of Schools in the
Borough of Richmond*

DR. I. VICTOR BURGER

Staff

<i>Director</i>	Roswell S. Coles
<i>Administrative Assistant</i>	Carla E. Nesslinger
<i>Assistant</i>	Bessie W. Nellis

Curatorial Departments

<i>Art</i>	Jean Leason
<i>History and Literature</i>	Mabel Abbott
<i>Librarian</i>	Dorothy A. McCracken
<i>Scientific Periodicals</i>	Joseph F. Burke
<i>Research Associate, Ethnology</i>	Elliott Burgher
<i>Research Associate, History</i>	H. Cleaver Brown
<i>Research Associate, Genealogy</i>	Frank P. Bascom
<i>Music</i>	Harry Russell
<i>Prints and Photographs</i>	Daniel L. Bridgman
<i>Science</i>	Robert Mathewson
<i>Davis Collections</i>	John Koestner
<i>Research Associate, Algae</i>	I. C. G. Cooper
<i>Research Associate, Ecological Chemistry</i>	Lee A. Ellison
<i>Research Associate, Myxomycetes</i>	Robert J. O'Connor
<i>Research Associate, Microscopy</i>	Joseph F. Burke

Education

<i>Director</i>	Pearl L. Coles
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Instructors

Frederic N. Adams.....	<i>Photography</i>
Albert Barbelle	<i>Commercial Art</i>
Nina Blake	<i>Mural Decoration at Home</i>
Irma Csak	<i>Ceramics & China Painting</i>
Helen F. Friedman.....	<i>Silk Screen Print Making</i>
Marcella Geon	<i>Opera Lecture Recitals</i>
Lola L. Gerow.....	<i>Water Color Painting</i>
Margaret Giro.....	<i>Rug Making</i>
William Johnston	<i>Oil Painting, Young People</i>
Doris Jones	<i>Crayon & Poster Painting</i>
Jean Leason	<i>Oil Painting, Young People</i>
Percy A. Leason.....	<i>Oil Painting, Adults</i>
Arthur E. Lorenzani.....	<i>Sculpture</i>

George Martin	<i>Piano Classics</i>
Robert Mathewson	<i>Biology, Senior Science</i>
Daniel Milton	<i>Sculpture</i>
Henry Murray	<i>Junior Stamp Club</i>
Sylvia Pederson	<i>Jewelry</i>
Harry Russell	<i>Choral Techniques</i>
Charles C. Stoddard	<i>Local History</i>
William D. Sullivan.....	<i>Junior Photography</i>
Marjorie Sunderman	<i>Choral Conducting</i>
Carm Turisi	<i>Aerial Navigation</i>
Mathilde Weingartner	<i>Nature Handcraft</i>
Phyllis A. Whitney	<i>Fiction Writing</i>

Public Relations

<i>Director</i>	Alice Reichenbach
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Maintenance

<i>Guard</i>	Jesse Feldt
<i>Janitor</i>	Howard Coleman
<i>Watchman</i>	Harrison Johnson
<i>Custodian, Britton Cottage</i>	Florence Mathewson
<i>Custodian, Davis House</i>	Mabel Abbott

The Woman's Auxiliary

<i>President</i>	Mrs. Frederick F. Richardson
<i>First Vice-President</i>	Mrs. Edward A. Bungay
<i>Second Vice-President</i>	Mrs. Thomas J. Bothwell
<i>Third Vice-President</i>	Mrs. Charles Berry
<i>Recording Secretary</i>	Mrs. John Anderson
<i>Corresponding Secretary</i>	Mrs. Samuel Stickle
<i>Treasurer</i>	Mrs. John W. Stout

PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES, Vol. XI, No. 4, July 1949. Published Quarterly in October, January, April and July, by the Staten Island Institute of Arts and Sciences, 75 Stuyvesant Place, Staten Island, N. Y., and entered as second class matter at Staten Island, N. Y., under Act of August 24, 1912. Mabel Abbott, Editor.

Report of the Treasurer

ROBERT M. LENG

STATEMENT OF FUND BALANCES

For the Fiscal Year ended April 30, 1949

	<i>Balances May 1, 1948</i>	<i>Increases</i>	<i>Decreases</i>	<i>Balances Apr. 30, 1949</i>
Nathaniel L. Britton fund:				
Principal	\$ 25,112.33	\$ 4,049.24		\$ 29,161.57
Income	717.42	846.71	\$ 625.00	939.13
William T. Davis fund:				
Principal	198,384.04	13,935.07	926.85	211,392.26
Income	6,158.07	6,332.67	8,298.07	4,192.67
John J. Crooke fund:				
Principal	2,000.00			2,000.00
Income	35.32	90.00	89.67	35.65
D. M. Van Name fund:				
Principal	100.00			100.00
Income	6.14	2.95		9.09
Building fund	1,000.00	20,000.00*		21,000.00
Endowment and general funds:				
Principal	29,700.00	((20,000.00)*)		
		(100.00)	693.18	9,106.82
Income	3,746.99	3,394.10	5,758.88	1,382.21
Special accounts:				
1949-50 dues		384.00		384.00
Music	290.52	840.30	1,002.99	127.83
Art	169.43	679.25	506.80	341.88
Life class	65.40	143.75	202.60	6.55
Sundry courses	667.35	2,852.50	2,534.36	985.49
Camera Club		74.00	73.00	1.00
Britton Cottage garden	(463.68)	128.25	276.76	(612.19)
	<u>\$267,689.33</u>	<u>\$33,852.79</u>	<u>\$20,988.16</u>	<u>\$280,553.96</u>

*Transfer as authorized by Board of Trustees.

Represented by:

Securities held by Institute:

U. S. Treasury bonds \$ 60,700.00

Other 2,000.00

Securities held by City Bank Farmers Trust Co.:

U. S. Treasury bonds (face amount, \$203,500)..... 207,438.98

Bonds and mortgages \$26,522.82

Less—Reserve 26,522.82

Bonds and mortgages held by Lord, Day & Lord..... 3,304.16

Cash held by Institute:

Checking account \$ 729.42

Savings accounts 4,833.72

Petty cash at Museum 50.00

5,613.14

Cash held by City Bank Farmers Trust Co..... 357.84

Accrued interest due to City Bank Farmers Trust Co..... 139.84

Nominal value of equity in Museum building, exhibits and fixtures 1,000.00

\$280,553.96

ANALYSIS OF CHANGES IN FUNDS

INCREASES

Principal:

Final transfer from N. L. Britton Estate.....	\$ 4,019.24
Contributions to Britton fund.....	30.00
Amounts realized from Davis fund mortgages, etc.	13,935.07
Life membership	100.00

\$18,084.31

Income:

From securities and cash held by Institute.....	\$ 1,768.58
From securities held by Lord, Day & Lord.....	205.26
From securities held by City Bank Farmers Trust Co.	6,200.05
Dues from members	1,548.00
Dues from affiliated societies.....	102.00
Contribution from Woman's Auxiliary.....	500.00
Other contributions	50.00
Fees from sundry courses.....	222.55
Other miscellaneous income.....	68.99

10,666.43

Other accounts:

1949-50 dues received in advance.....	\$ 384.00
Music section receipts.....	840.30
Art section receipts.....	679.25
Life class receipts.....	143.75
Other Museum classes receipts.....	2,852.50
Camera Club dues.....	74.00
Contributions, etc., for Britton Cottage garden	128.25

5,102.05

Total increases	\$33,852.79
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DECREASES

Principal:

Legal fee, etc. re Davis fund accounting.....	\$ 926.85
Public relations expenditures.....	693.18

\$ 1,620.03

Income:

Publications	\$ 1,698.48
Museum operating expenses.....	3,561.74
Salary of Director	1,200.00
Salary of Treasurer.....	250.00
Salary of Curator of Davis collections.....	540.00
Salary of summer assistant.....	200.00
Davis memorial lectures.....	616.30
Davis memorial scholarship.....	500.00
Davis biography expense.....	35.11
Davis house repairs.....	3,908.60
A.A.M. convention expenses.....	175.00
City Bank Farmers Trust Co. commission....	996.48
Books, subscriptions, etc.	89.67
Britton Cottage expenses.....	837.50
Purchase of air brush.....	162.74

14,771.62

Other accounts:

Music section expenses.....	\$ 1,002.99
Art section expenses.....	506.80
Life class expenses.....	202.60
Other Museum classes expenses.....	2,534.36
Camera Club dues transferred.....	73.00
Britton Cottage garden expenses.....	276.76

4,596.51

Total decreases	\$20,988.16
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Report of the Woman's Auxiliary

ETHEL E. BOTHWELL

The Woman's Auxiliary has completed its fortieth year of association with the Staten Island Museum. Meetings have been held on the last Wednesday of each month, from October through May, and the Executive Board meetings on the third Monday of each month. Officers for the year were: President, Mrs. Anselm Nascher; First Vice-President, Mrs. Frederick F. Richardson; Second Vice-President, Mrs. Harry Hinkel; Third Vice-President, Mrs. A. F. Taber; Recording Secretary, Mrs. Thos. J. Bothwell; Corresponding Secretary, Mrs. Samuel Stickle; Treasurer, Mrs. Edward Bungay.

The highlights for the season were the President's Reception and Tea, held at the Museum on October 27th, 1948, and the Anniversary Tea held on March 13th, 1949. At the President's Tea, approximately three hundred and fifty members and friends attended, among them some of our Past Presidents, and representatives from many of the Staten Island Women's Clubs. Mrs. Jean Thompson Hicks, soprano, was accompanied at the piano by Miss Marjorie Sunderman. At the Anniversary Tea Mrs. Nascher disclosed the fact that our Historian, in examining old records, discovered the existence of an Auxiliary Committee as far back as 1909, so we have incorporated these years of work with the present Auxiliary. Honored guests were members prior to 1924, who are still members today. Mrs. Gordon Wightman showed slides and spoke about "The Historic Hudson." Mr. Arthur Martens entertained with a number of mandolin selections.

Mrs. Jacob Flatow, Program Chairman, presented a very delightful variety of programs during the year.

Artists who furnished the musical programs were: Miss Alice Jane Race, soloist, accompanied by her father, Dr. Oscar Race; Mrs. Paula Barbelle, pianist; Mrs. William Gerke, Jr., soloist; and Miss Dorothy Kumm, Port Richmond High School student, who held us spellbound with her beautiful renditions on the piano. She also played Christmas carols for group singing.

Miss Harriet Menken, producer, writer, radio commentator and theater critic, braved a very stormy day in December to come to Staten Island to give a talk on "Stage People I Have Known." Her talk was very informal and she cited many interesting interviews she has had with some of the actors and actresses we have seen so often on screen and stage.

Mr. Robert Mathewson, Natural History Curator, showed two pictures during the year: "Mexico City" and "Patscuaro."

The Auxiliary was very fortunate in being able to present Mrs. Freda Hemming Davenport, Soprano, and Morton Davenport, Baritone. They entranced the audience with a group of solos and duets, done in the inimitable Davenport style. Mr. Anderson acted as their accompanist.

Mrs. H. Koenig amused us with her recitations.

Miss Mabel Abbott, a member of the Museum staff, brought us stories of Staten Island in years gone by. Her subject was "As Others See Us, Staten Island in Literature." To inject a little humor into her subject she had Mr. Kenneth Collins sing a ballad written during the last century, entitled, "A Staten Island Gentleman."

Mrs. Travis W. Childs displayed her very interesting and beautiful opera plaques. These plaques portrayed in detail important scenes from popular operas. She explained briefly the story of each scene and how she managed to obtain the materials needed, which at times seemed impossible due to the shortages at the time she made them.

The charming Countess Leonardo de Murabito came to us again this year. She is a well known writer, better known by her pen name "Helen Hale." The subject she chose was "Conservation."

On November 17, 1948, an Apron and White Elephant Sale was held under the chairmanship of Mrs. Bothwell. It proved to be very successful and the luncheon held in conjunction with the sale met with great favor.

The Annual Dessert Bridge, under the chairmanship of Mrs. Charles A. Duncker and Mrs. Thomas J. Bothwell, was held on

May 3rd at the C.Y.O. in Port Richmond. The hall was decorated beautifully with lilacs, iris and other spring flowers, and the affair was attended by a record number of members and friends.

The Auxiliary presented the Museum with a check for \$600. A donation was also made to the N.Y.C. Federation Scholarship Fund.

Thirty-one new members were received into the Auxiliary this year and two members were reinstated. Membership now numbers 370.

The following officers were elected at the meeting in May to serve for the coming year: President, Mrs. Frederick F. Richardson; First Vice President, Mrs. Edward Bungay; Second Vice President, Mrs. Thomas J. Bothwell; Third Vice President, Mrs. Charles Berry; Recording Secretary, Mrs. John Anderson; Corresponding Secretary, Mrs. Samuel Stickle; Treasurer, Mrs. John W. Stout.



WOMAN'S AUXILIARY 40TH ANNIVERSARY TEA

March 13th. 1949

25-year members: Mrs. Willard Grimes, Mrs. A. W. Hoffmeyer, Mrs. Oscar Sperrle, Mrs. Frank Cook, Mrs. Anton Schwab, Miss Laura Burrowes, Mrs. Arnold J. B. Wedemeyer, Mrs. Henrietta Beaumont, Miss Laura Yetman, Mrs. Charles Lorenz.

Photo by Robert Mathewson

Report of the Secretary and Director

ROSWELL S. COLES

Board of Trustees

The Board of Trustees held one special and four regular meetings during the year. Officers for the year were: President, Dr. James P. Chapin; First Vice-President, Dr. Frank A. Strauss; Second Vice-President, Mrs. A. W. Hoffmeyer; Treasurer, Robert M. Leng; Secretary, Roswell S. Coles.

Trustees elected May 21, 1949, to serve to 1952, are: Joseph F. Burke, Lee A. Ellison, Mrs. A. W. Hoffmeyer, Cornelius G. Kolff, Joseph A. Palma, Alfred Shriver and Dr. Frank A. Strauss. Manuel J. Johnson was elected to fill the unexpired term of I. C. G. Cooper, whose resignation from the Board of Trustees was accepted with regret, effective April 21, 1949.

In addition to the ordinary business carried on by the Board of Trustees, four items need special notice. Following an offer by Borough President Cornelius A. Hall of a plot of City-owned land on St. Marks Place, as a site for the new museum building, it was agreed to accept the site, thus assuring the continuation of the Museum in the St. George area. The Board also agreed to sponsor the recreation areas of the three Staten Island projects of the New York City Housing Authority, a step which will have far-reaching consequences in bringing the benefits of the Museum to the people of Staten Island.

It is our sad duty to record the passing on June 17, 1949, of our Second Vice President, Mrs. A. W. Hoffmeyer. Her loyalty and devotion to the institution and her cheerful disposition had endeared her to all. A more complete account of her service to the Institute will be found below.

Two new Museum departments were set up, a Department of Public Relations with Mrs. Alice Reichenbach as director, and a Department of Education with Mrs. Roswell S. Coles as director. Mr. Johnson undertook the chairmanship of a very successful membership drive as reported below. Mr. Edwin Rundlett was

appointed Chairman of the Britton Memorial Committee, following the resignation of Mr. Cooper, and Mrs. Anselm Nascher was appointed Chairman of the Committee on Public Housing. Elliott Burgher was elected a Research Associate in Local Ethnology.

The William T. Davis Scholarship was awarded to Edward Silverstein, a graduate of Curtis High School and an active member of the Museum Science Club. Edward is a student at the University of Chicago.

Fellows

Edwin Rundlett was elected a Fellow of the Institute at the meeting of the Board of Trustees held April 18, 1949 and, following his resignation as a Trustee, Mr. I. C. G. Cooper was elected by ballot dated April 21, 1949. The following citations were presented at the Annual Meeting of the Institute on May 21, 1949.

ISAIAH CLEEVE GORDON COOPER

In a real sense this fellowship honors three phases of your productive life. In your native country, England, you became a Naval Architect, winning several scholarships, writing text books and technical articles, teaching and finally serving as a supervising designer in one of His Majesty's dockyards during World War I.

In the United States, following service with private shipbuilders, you served in the Brooklyn Navy Yard as Naval Architect and Mechanical Engineer, and only those of us who were intimately associated with you during the war years realize the extent of your personal contribution to the war effort.

On Staten Island you have devoted yourself to several community projects: For seven years you have been a leader of the Deems Literary Society orchestra and glee club, and vice president and secretary. In the field of Natural History, which we are particularly honoring tonight, you have devoted your energies to the study of the algae about which you have written and lectured. You are a member of the New York Botanical Garden, the Torrey Botanical Club, the Phycological Society of the Americas and a Fellow of the New York Microscopical Society. You have served

as president of our own Nature Club and as a member of our Board of Trustees you designed the Britton Memorial Garden.

Therefore you have been elected a Fellow of the Staten Island Institute of Arts and Sciences, April 18, 1949.

EDWIN A. RUNDLETT

Tonight we are honoring particularly your twelve years' service to your community as arboriculturist in the Department of Parks. In this position you have been in charge of all our Staten Island park vegetation as well as our street trees, and have through this work done much to promote a richer appreciation and fuller understanding of the part Nature plays in beautifying our lives.

You have acquired a wealth of information on the planting, care and identification of our woody plants which you have most freely and generously passed on to your fellow citizens.

Your interest in Museum affairs is gratifying. You have served three years as field secretary and two as president of the Section of Natural History, and are now serving as chairman of the Britton Memorial Committee. In addition you are actively interested in the National Shade Tree Conference, the American Iris Society, the Staten Island Zoological Society, the Manor Civic Association and the Staten Island Bee Keepers' Society.

Therefore you have been elected a Fellow of the Staten Island Institute of Arts and Sciences, April 18, 1949.

City of New York

In addition to the assistance offered by Borough President Hall in obtaining a site for the new Museum, we are indebted to the City of New York, and particularly to Mayor William O'Dwyer and Commissioner of Parks Robert Moses, for their continued support of the Museum and we again take this opportunity to express our gratitude for what has been done. In addition to the budgetary item of \$25,025.00 for salaries and other than personal service, a new heating system has been installed and other capital improvements will be made during the coming year.

Membership

The group composition of the Institute remained unchanged, with seven sections, four affiliated societies and the Woman's Auxiliary. There were: 1 Honorary Member, 6 Patrons, 9 Fellows, 40 Life Members, 728 Annual Members, approximately 300 Associate Members and about 370 members of the Woman's Auxiliary. During the spring campaign 176 Annual Members were added.

Institute Council

The Institute Council held two meetings, largely devoted to helping with the various exhibitions, publications and membership campaign. Officers who served during the year were: President, W. N. Meyer; Vice-President, Walter Kuhn; Secretary, Carla E. Nesslinger.

Program

The total program indicates a steady, continued growth. There were 565 adult groups, 416 children's groups and 171 visiting school classes with a total attendance of 65,071 for the year. If adult classes are held as scheduled next year, both the Museum and Davis House will be used to capacity, and any further growth in our program must be carried on in other locations. Details of our year's work appear below.

A word of appreciation should be said for nearly 100 individuals who have given volunteer service during the year. Without this help our program could in no way be carried out. This volunteer aid was rendered in all types of work and in every department, from nearly full time attendance of Daniel L. Bridgman, Joseph F. Burke and H. Cleaver Brown to occasional attendance by many kind ladies who assisted in mailing and other duties connected with the membership campaign. A certificate was prepared this year and is being sent to all those who perform volunteer services.

Institute meetings were held as follows:

October 17, 1948—Museum Open House, opened by Borough President Cornelius A. Hall.

November 20, 1948—William T. Davis Lecture, "Colorado High Country" by Frank Gunnell.

December 18, 1948—Christmas Concert, by members of the S. I. Oratorio Society, Treble Ensemble, S. I. Symphony Society and George Martin.

January 23, 1949—Combined Meeting with the S. I. Zoological Society, "Australia's Modern Curiosity Shop," by Lt. Comm. John W. Hess.

February 19, 1949—William T. Davis Lecture, "Caravan to Tibet" by Nicol Smith.

March 19, 1949—William T. Davis Lecture, "Antarctic Adventure" by Comm. Finn Ronne.

April 30, 1949—Annual Exhibition sponsored by the S. I. Microscopical Society.

May 21, 1949—Annual Meeting. William T. Davis Lecture, "Amazon Jungle Tribes," by Lewis Cotlow.

Exhibitions

Special exhibitions were arranged by all Museum groups for our Museum Open House in October, and this event also initiated a new series, "Science in Industry on Staten Island," prepared by our Science Curator, Mr. Mathewson. The Borough exhibit prepared for the Golden Anniversary was presented to the Museum by Borough President Hall and has been on exhibit during the year. Details of our regular and special exhibitions will be found in the departmental reports.

Accessions

There have been 107 separate accessions to the Museum collections, ranging from the extensive library and collections from Howard Notman to individual mineral specimens, and from early deeds to the latest volumes relating to Staten Island. These are noted further in the reports of departments.

DONORS

Mrs. Clyde S. Babbitt	Miss Louise Kreischer
Miss Ethel O. Blanpied	Clarence T. Lansing
Miss Edith Boecking	Percy A. Leason
Miss Cornelia Borgemeister	St. George Public Library
Willis A. Boughton	Alexander Light
Chessor Bowles	Dr. Milton Sills Lloyd
Lester Callan	Mrs. Mary Prall Logue
Howard H. Cleaves	Miss Carolyn C. Mase, estate
Roswell S. Coles	Mrs. Thomas I. Miller
I. C. G. Cooper	Robert Moore
Charles S. Daley	Mrs. Ruth Nauss
Daughters of Pennsylvania	Mrs. Fred Nellis
in N. Y.	Mrs. Carla E. Nesslinger
Miss Amelie Elkind	Howard Notman
Charles Ericson	Rev. Philip Peltz
B. J. Feitelson	Mrs. Marie Ronning
John Gans	Mrs. Mildred Rudolph
Herman Guether	Walter Rudolph
Hon. Cornelius A. Hall	Sons of the American
Charles Hart	Revolution
Mrs. J. M. Helm	Miss Marie Stahr
Mrs. A. W. Hoffmeyer	Dr. Henry G. Steinmeyer
Miss Marian Holyoke	Mrs. Charles Stiles
Fred W. Hopping	Herbert F. Stone, estate
Mrs. H. R. Hunt	James M. Talbot
Mrs. W. E. Jackson	Mrs. Thomas D. Toy
William Jackson	Hon. Grover Whalen
Louis W. Kaufmann	Miss Phyllis A. Whitney
Mrs. Jessie M. Kelly	Dr. Orrin S. Wightman
Mr. and Mrs. Mark B. Kerr	W. M. Winant
Mrs. S. Adolphus Knopf	Woman's Auxiliary
John Koestner	Canio L. Zarrilli

NECROLOGY

It has been our sad duty to report, during the year, the passing of five loyal long-term members: Miss Carolyn Mase, Miss Elvira Methfessel, Theodore H. Spratt, Mrs. Daniel D. Feldman and Miss Emelia Joan Schneider. To this list we now must unfortunately add the names of our Second Vice-President, Mrs. A. W. Hoffmeyer, and our former Treasurer, Charles A. Ingalls.

Mrs. A. W. Hoffmeyer

Mrs. Hoffmeyer has been a guiding spirit in the Museum for many years, having become an annual member in 1908, a life member in 1925, a Trustee in 1928, and Second Vice-President in 1942. She was also a member of the Woman's Auxiliary, having served actively in various capacities.

Her happy spirit brought joy to all of us who have been associated with her, and it was a shock to learn of her unexpected passing on June 17, 1949. Although she was 78 years old, one thought of her always as a relatively young person, full of vigor and the zest for living. We shall miss not only her assistance in many Museum affairs but also her ready smile, quick wit and kindly disposition.

A more extended biographical report of Mrs. Hoffmeyer's long and active life will appear in the October Proceedings.

Charles A. Ingalls.

Mr. Ingalls died May 9, 1949 at the age of 78. He was associated with the banking business and was our Treasurer from 1908 to 1940. In recognition of his long and faithful service the Board of Trustees unanimously recorded the following resolution in the minutes of its meeting of May 23, 1949:

WHEREAS Charles A. Ingalls loyally served the Staten Island Institute of Arts and Sciences as Treasurer from January 4, 1908 to November 4, 1940, performing voluntarily and freely the various duties of that office,

AND WHEREAS Mr. Ingalls guided the financial affairs of our Institution during a period of great development, from the

Association to the Institute of Arts and Sciences, and from our quarters in the Borough Hall to the present Museum building,

BE IT HEREBY RESOLVED that the Board of Trustees of the Staten Island Institute of Arts and Sciences, by motion duly made and carried, inscribes in the minutes of this meeting of May 23, 1949 its deep appreciation of the loss suffered in the passing of Mr. Ingalls on May 9, 1949 and that a copy of this resolution be sent to his son, Sherman Ingalls.



Edwin M. Rundlett and I. C. G. Cooper receive their citations as new Fellows at the Annual Institute meeting, May 21, 1949.

Photo by Robert Mathewson

EDUCATION

Report of Department of Education

PEARL L. COLES

The Department of Education was established by the Board of Trustees at its regular meeting, April 18, 1949, for the purpose of organizing and coordinating the rapidly expanding educational activities of the Museum.

These activities, at present, are centered in the Sections and Affiliated Societies and in the regular classes for children and adults, but there is perhaps no activity in which we engage which does not have some genuine educational implications.

During the past year we have had 565 adult groups, 416 children's groups and 171 visiting classes, and nearly all of these 1152 groups have had some sort of educational program, whether it were one of the William T. Davis lectures or a discussion on how to make better photographs.

There have been 15 adult courses and 13 classes for children given during the year to 255 adults and 145 children. Adult courses were accredited by the Board of Education for in-service credit for teachers.

Sixteen adult courses are being offered for the fall of 1949. It is the purpose of the department to evaluate this work from the point of view of the needs of the Staten Island public. Since the formation of the department we have mailed questionnaires to all instructors and members of adult classes seeking information for future guidance in this field.

On June 2, 1949, a "graduation" reception was arranged for class members and instructors. After a talk by Assistant Superintendent of Schools, Dr. I. Victor Burger, instructors were introduced and certificates given for completed work. The meeting was followed by a reception and an exhibit of the type of work done in our courses.

PUBLIC RELATIONS

Report of the Department of Public Relations

ALICE REICHENBACH

A public relations program was authorized by the Board of Trustees at their January 17th meeting. On January 24th, Mrs. Alice Reichenbach joined the Museum's staff as Public Relations director.

An educational program was immediately instituted, to acquaint more people with the Museum and its varied activities. Under the experienced leadership of Trustee Manuel Johnson, a membership campaign was undertaken. A descriptive folder, entitled "IT'S YOUR MUSEUM," was made up and sent to persons who, it was felt, should be Museum members. Many members were extremely cooperative in submitting the names of friends who might be interested, and we were fortunate in having the services of a fine group of volunteers to help with the clerical work. As a result of the combined efforts of all these persons, our membership has been increased by 30%, and we are gaining new members daily.

Public Relations has been instrumental in focusing the attention of a greater number of persons on the Museum's adult education courses. On the evening of June 2nd, a reception was held, to which students who had completed the work in the Spring courses were invited to bring their friends. A capacity crowd attended, and showed a great deal of interest in the exhibits of handmade jewelry and rugs, oil paintings, commercial art, photography and other products of the courses to be offered in the Fall semester. Throughout the Summer, a publicity program will be carried on, aimed at building widespread interest in the courses. Exhibitions of students' work are being arranged for display in the public libraries.

The Public Relations department is working with Frank Gunnell on a movie to be entitled "THIS IS YOUR MUSEUM." This film, designed to gain more friends and members for the Museum, will be shown to service groups, parent-teacher associations, civic groups and similar organizations on the Island.

ART

Report of the Department of Art

JEAN LEASON

With the additional space made available by the transfer of the offices and library to the Davis House we have been able to display more and larger exhibitions this year.

Eleven exhibitions were held during the year. Opening receptions have been attended by 2,913 persons. Artist members held their annual exhibition in the fall and Staten Island artists in the spring. Two one-man shows were held: Warren F. Robinson, head of the Art Department at Wagner College, and Fred W. Kost, a well known Staten Island painter in the last century.

The young artists on the Island were given the opportunity to display their work in the Staten Island High School art exhibition and students at McKee High School held a special exhibition of their commercial art work. The result of our Museum art classes was shown in a special exhibition, "Understanding Pictures." Mr. John M. Avent, principal of Curtis High School, presented the awards to the winners of the High School Art competition: Donald Robinson and Theodore Ewanisky of Curtis; Raymond Post and Charles Thompson, of Port Richmond High School; and Edward Van Cleaf of McKee. Dr. I. Victor Burger opened the special exhibition "Understanding Pictures."

A large and comprehensive exhibition of crafts executed by amateur and professional craftsmen on Staten Island was shown, and the popularity of the show indicates the great current interest in this work. Mrs. Rose M. Walsh, Assistant Chief, Community Activities Division of the New York City Housing Authority, opened the show.

Exhibitions of historical interest were displayed during the year. These included: portraits and memorabilia of the Kreischer family; an exhibition of china, glass, needlework, silver, prints and jewelry shown by members of the Museum's Woman's Auxil-

iary; a collection of Greek and Roman glass, by Mr. Robert Wigand; historic medals by Mr. Wigand; a colorful display of fans by Mrs. Edgar Sleight; two Staffordshire platters, one of a Staten Island scene and the other of Castle Garden, by Mrs. William L. Sweet; miniatures by Mrs. C. W. Brugger and Miss Violet Siemering. Mrs. Elliott Burgher's collection of pitchers has remained on display during the year.

Twelve art courses for adults and young people were held last year which were attended by 215 students. The following artists instructed: Percy Leason, oil painting; Mrs. Sylvia Pedersen, jewelry making; Daniel Milton, sculpture and Albert Barbelle, commercial art. Mrs. Lola Landry Gerow, Miss Doris Jones and the writer held classes for young people. Next year we have planned for classes in silk screen printing, china painting and ceramics and rug making as well as those listed for the past year.

Accessions include 16 landscapes painted by Howard Notman and presented by him; "Fresh Kills Meadow" by Carolyn C. Mase; two oil portraits, "Edwin T. Prall" and "Rachael Moore Thompson Prall" from the estate of Miss Edith M. Prall.

Ten paintings from the Museum collection have been cleaned and restored as necessary. Technical advice has been given on some of the old paintings on the Island and the writer has restored twelve of these. Three paintings of early Museum buildings were made during the summer of 1948 and displayed in the Golden Anniversary Exhibition in the fall.

Report of the Section of Art

PERCY A. LEASON

This year has been an active one for the Art Section. Forty new members have been welcomed into the Section, and the attendance at the annual Fall and Spring exhibitions has shown a gratifying increase.

The general standard of work of these exhibitions was maintained, and there was an increase in the number of exhibitors. Seventy-three paintings were hung in the members' exhibition, and one hundred and nine in the Spring exhibition. The executive committee acted as the jury of selection for these two shows and for the High School Art exhibition.



PREPARING FOR THE ARTISTS' CARNIVAL

Mrs. Margaret K. Rue and Mrs. Sylvia Pederson and son Bruce put the finishing touches on Svea Hall for the November Artists' Carnival.

Photo by S. I. Advance

The fourth Annual Artists' Carnival, held on November 6th at Svea Hall, was enjoyed by some 300 artists and their friends, and increased the Art Section's fund by \$250.58. Mrs. Margaret K. Rue, program chairman of the executive committee, acted as chairman of the carnival committee. She was assisted by Albert Barbelle, Jean Leason, Christian Eversen, Joseph Nugent, Ely Behar, Mabel Jack, Katherine Rodriguez, Thea Wilbur, Ester Tellefsen, Elizabeth Nugent, Julie Von Bevern, Mildred Rudolph and Veronica Von Zangenberg.

The executive committee acted as the reception committee at the nine opening receptions, and individual members served as receptionists at the Annual Institute Meeting, the graduation reception of the adult education courses, and other activities of the Museum.

Special programs were arranged for the openings of exhibitions. The Annual Members' exhibition was one of the features of the Museum Open House, at which Borough President Cornelius A. Hall made the opening address.

Prizes for the High School Art Exhibition and for the Annual Spring Exhibition were provided by the Section of Art. Mr. Albert Barbelle awarded a scholarship to Robert Lenning of McKee High School, for one term of his Commercial Art course.

Lecture demonstrations were given by Percy A. Leason, President of the Section, at the following places: Richmond County Country Club, Jewish Community Center, the National Arts Club during the annual exhibition of the American Artists Professional League, the New Jersey School of Fine and Applied Arts, and the Forest Hills Academy. Warren F. Robinson gave a lecture demonstration at Curtis High School.

The Art Section has provided judges for art competitions held by the Chamber of Commerce and Tappen Post of the American Legion. Mrs. Ester Dahl Tellefsen, chairman of the Rotary Exhibitions Committee, has provided the six Staten Island branches of the New York Public Library with eight exhibitions. Paintings have been lent to the Council of Social Agencies and the Girl Scouts.

The Life Sketching group, under the direction of Joseph Nugent, has enjoyed considerable popularity, and has held 20 sessions. Last summer six landscape sketching trips were held, and this summer enthusiastic artists will leave the Museum at 1:30 every Saturday for landscape sketching.

Officers who served during the year were: President, Percy A. Leason; First Vice-President, Ely M. Behar; Second Vice-President, Albert Barbelle; Treasurer, Daniel L. Bridgman; Secretary, Jean Leason.

Committee Chairmen were: Program and Carnival, Mrs. Margaret K. Rue; Rotary Exhibitions, Mrs. Ester Dahl Tellefsen; Exhibitions, Alfred McNamara; Education, Joseph F. Nugent.

SCIENCE

Report of Department of Science

ROBERT F. MATHEWSON

The popular response to the exhibits, lectures and other programs provided by the Science Department during the year just ended has been most gratifying; as has also the number of requests made by outside agencies for similar work.

A total of 122 groups, numbering approximately 7,000 people, was served. Some of these activities are here summarized:

Youth Programs

Eighty-four visiting classes from all boroughs, numbering 4750 children, were given lectures on Indian Lore, Bird Life, Insects and other subjects.

Lecture programs of a specialized nature were provided for such organizations as the Girl Scouts, Camp Fire Girls, Boy Scouts, Y. M. C. A., Cub Scouts, the Curtis Biology Honor Society, and others, reaching an estimated 1,000 young people.

Sixteen field trips were conducted, participated in by approximately 500 youngsters.

Your curator has also served both as an advisor and counselor for many of the above named organizations as well as to the Museum's Science and Biology Clubs. The embryonic Staten Island Youth Council, composed of representatives of 14 Staten Island youth organizations has also availed itself of this service.

Subject matter of a more specific nature was given in lecture form to seven adult groups, Fathers' Clubs, Boy Scout Leaders, Girl Scout Leaders, Natural History groups and the Staten Island Microscopical Society.

Replies to demands by Staten Island families for information regarding household pests, pets, and natural history finds, was another aspect of this department's service to the community.

Exhibitions

Complete changes of exhibition material were made a number of times through the year. All sections of the Museum, as well as outside groups, employed our exhibit cases. The new "Science in Industry" exhibit sponsored by the S. S. White Dental Manufacturing Corporation, as well as the aviation exhibition sponsored by Edward J. McCormack, president of the S. I. Airport, have proven their educational value by their appeal to school children and teachers.

Many projects of a scientific nature have been completed during this last year, and we take the opportunity to thank the following for their assistance: Dr. P. P. Kellogg of Cornell University, Dr. D. F. Mitchell of Columbia University, Dr. Dorothy Oppenheim of the New York City Department of Health, Dr. William Travalga of the Department of Animal Behavior of the American Museum of Natural History, and Dr. Ralph Deal of Wagner College.

Visits to other institutions, such as the Museum Convention at Rochester, New York, and the New Jersey State Museum at Trenton, have suggested new techniques which we hope to apply in the near future. Among numerous innovations planned is a complete revamping of the main exhibition floor, both to modernize it and provide for better presentation of exhibits.

Probably no clearer example of our need for a larger and better equipped Museum can be given, than the fact that we had to turn away hundreds of people from one of our regular William T. Davis Memorial Lectures because the hall was full.

Following are reports of other activities conducted in our science and natural history sections.

Report of the Section of Natural History

MATHILDE WEINGARTNER

The activities of the Section of Natural History were once again wholeheartedly supported by its members and many friends. The twelve indoor meetings as well as the various field trips were attended by an increased membership.

The regular monthly meetings at which programs on various subjects were provided, also gave opportunity for the members

to report on their personal nature observations. Among the latter was a report by L. A. Ellison of a large number of American Egrets and little Blue Herons feeding in the Travis marshes. Mr. Mathewson reported an increase in the population of the Spadefoot Toads. Ornithological history was made when Howard H. Cleaves discovered two nests of Herring Gulls at Oakwood Beach in June 1948, fifty miles southwest of the most southerly previous record. A pipe was sunk in Basket Willow Swamp in an attempt to obtain geological data from below the muddy bottom of the pond. However, the pipe became clogged and efforts had to be abandoned until better methods are worked out. The Herbarium Committee has made considerable progress with the classification of specimens and cataloging and arranging of specimens. In case our meetings should become disorderly, Mr. Hoffmeyer fashioned a beautiful gavel for us out of a piece of cedar wood.



OPENING OF STATEN ISLAND AIRPLANE EXHIBIT

October 17, 1948

Photo by S. I. Advance

The following programs were given at our regular monthly meetings on the fourth Saturday of each month and held in the Museum auditorium:

Mycetozoa in Color, I.C.G. Cooper and Robert J. O'Connor
Fire Prevention, W. Lynn McCracken
Hither & Yon to Oregon, Roswell S. Coles
Tailless Amphibians, Robert Mathewson
Colorado and California, Conrad Heintz
Anti-biotics, Dr. Leona Schnell
Switzerland, France & the Low Countries,
Dr. Frank A. Strauss
Diatoms, Joseph F. Burke
Here and There With a Color Camera, Howard H. Cleaves
Nature Quiz, Mathilde Weingartner

The average attendance at these meetings was 40.

Aside from the regular monthly field trips, on which our island Natural History was given a close scrutiny, and some of which terminated in the homes of such lovely people as the Nesslingers, the Plumbs, the Elwood Coles and the Sleights, where refreshments were served to an ever hungry crowd, a number of extra walks were held to quench the thirst for knowledge of the enthusiasts. Mr. Burke led the annual All Day Hike in November. Mr. Mathewson guided the group on a Night Sounds Hike where frogs as well as Night Herons, Woodcock, and Whip-poor-will were featured. Mr. Redjives conducted four Early Morning Bird-walks for the study of migrating birds. Even a steady downpour could not stem the enthusiasm of the observers in their study of shore birds. An all day excursion was made to the Audubon Nature Center at Greenwich, Conn. This was complete with picnic lunches and a guided tour of the nature trail.

The Section also took part in the annual Christmas Bird Census, reports of which were submitted to the Audubon Society. As this report goes to press the annual breeding bird census is in progress. This year it is being taken over a period of three weeks, at the end of which time reports will be submitted by the various observers and a combined list submitted for the next issue of the proceedings.

Report of the Staten Island Microscopical Society

ROBERT J. O'CONNOR

The meetings of the Society were held on the first Wednesday of each month. An average of ten members and friends was present at each meeting.

A wide variety of subjects was presented for consideration and discussion. These included:

1. "Analysis of Certain S.I. Natural Waters
and Rain Waters".....*Lee A. Ellison*
2. "The Story of Shellac".....*George Ashby*
3. "A 1948 Trip to Switzerland, Belgium,
Luxemburg and France with Nature
Observations"*Dr. Frank Strauss*
4. "Crystals"*Charles Ericson*
5. "A Microscopical Study of Staten
Island Serpentes".....*Carleton Siemer*
6. "Field Explorations of S.I. Rocks
and Minerals".....*R. H. Shepherd*
7. "Hematological Techniques".....*Helen Siemer*
8. "Amphibians' Brain Wave Patterns in
Response to External Stimuli".....*Robert Mathewson*

The highlight of the year's activity was the nineteenth annual exhibition of microscopical objects and related material. In addition to the subjects presented by members of the society, a number of other organizations participated to make the exhibition a big success. Among these exhibitors were Wagner College, Augustinian Academy, New Dorp High School, Staten Island Day School, American Red Cross, U.S. Marine Hospital, Richmond Health Center, S.I. Beekeepers Association, S.I. Cancer Committee, S.I. Tuberculosis and Health Committee and the S.I. Zoological Society.

The Officers of the society are:

- | | |
|-------------------------|-----------------------|
| Joseph F. Burke..... | <i>President</i> |
| I.C.G. Cooper | <i>Vice-President</i> |
| Roswell S. Coles..... | <i>Treasurer</i> |
| Robert J. O'Connor..... | <i>Secretary</i> |

Report of Richmond County Chapter, New York State Society of Professional Engineers

RAYMOND J. REDDY

The Annual Meeting was held on January 5th, 1949, at which time the following officers were re-elected for another year: Frederick Mardus, President; Lewis H. Rabbage, 1st Vice-President; Barnett Kadin, 2nd Vice-President; and Raymond J. Reddy, Secretary. Michael Pisetznier was elected Treasurer, with Bernt N. Bruun and Ola T. Sater as Directors for three years.

The first meeting after the summer recess was held on September 9, 1948, which started a series of six meetings devoted to "Staten Island's Growth—Problems of City Planning, Sanitation, Transportation and Housing," with William J. Massa as General Chairman.

1—The Pollution of New York Harbor Area—Dr. N. Colosi, member of Interstate Sanitation Commission, with discussion led by Frederick H. Zurmuhlen, Commissioner of Public Works for New York City.

2—Sewer and Drainage Problems on Staten Island—Raymond J. Reddy, Sewer Engineer, Borough of Richmond, with discussion led by Carl Ettlinger.

3—Public Housing on Staten Island—Andrew M. Anderson, New York City Housing Authority, with discussion led by Robert Werner.

4—The New Look in your Ferry Terminal and Ferry Boats—Lewis H. Rabbage, Chief Engineer, Department of Marine and Aviation, with discussion led by Emil A. Verpillot.

5—Forum on Air Pollution—William J. Christie, Smoke Abatement Engineer, Department of Smoke Regulation, Hudson County, New Jersey; John L. Hodges, Chief of Division of Air Pollution Control, Department of Public Health, Philadelphia; and Thomas Barrett, Power Engineer, Manhattan, with discussion led by Cornelius A. Hall, President, Borough of Richmond.

6—Discussion of Construction Activities on Staten Island—
Joint meeting with Staten Island Society of Architects, Michael
Uslan, President.

The Chapter co-operated with the Narrows Bridge Committee of the Borough President in preparation for the public hearing held in January before the Army-Navy-Air Force Board, who have finally rendered a favorable report for such a project. The Annual Dinner of the Chapter, held on February 19, 1949, at the Meurot, was an outstanding social success under chairmanship of Carl Ettlinger.

The last meeting before the summer recess, held on June 1, 1949, was devoted to the discussion "The Society of Professional Engineers and its Value to the Community," and brought forth ideas for future programs. Newly elected State President George J. Nicastro, New York County Chapter, was a guest at this meeting. The next meeting will be held on September 7, 1949.

Britton Memorial

EDWIN RUNDLETT

A report of the things accomplished at the Britton Memorial during the past year must begin with the visit to the Cottage made by the Committee early in October, 1948. It was then apparent that prompt measures would have to be taken, not only to make the house habitable but to repair deterioration and preserve it.

Mr. Robert Mathewson, Curator of the Staten Island Museum, moved in with his family, and has himself replaced inside walls with Celotex and Sheet Rock, adding wooden support where needed, painted the woodwork, papered one room, repaired window leaks and plugged rat holes. Downstairs, with the aid of a carpenter, all floor beams over the cellar were replaced, and two decayed beams of the floor above were given emergency support. A combination gas and oil stove has been bought and installed.

A long line of brass piping has been installed to supply water for the pool and rock garden, and an outlet has been left for a future drinking fountain. The work of Mr. I.C.G. Cooper on the

pool has been previously reported. He has made a carefully thought out plan for the development of the grounds as a wildflower sanctuary worthy of the famous botanist whom it will commemorate; and has made a model of the house and grounds as he and his committee would like to see them. This is on display at the Museum.

Acknowledgment is gratefully made of the gift of \$25 in May, 1949, from the Daughters of Pennsylvania in New York through Mrs. Lou Ross, 725 West 184th Street, New York; a gift of \$5.00 from Mr. Charles Ericson; and the fine cooperation of the members of Garden Clubs and of the Woman's Auxiliary of the Museum, in making a success of the plant sale a year ago.

It is with deep regret that we report that Mr. Cooper, overburdened by his own work, has been advised by his doctor that he must give up some of his activities. The Board of Trustees, on May 23, induced the writer to relieve Mr. Cooper of the duties of the chairmanship of this committee. The committee as now constituted consists of: Edwin Rundlett, Lee A. Ellison, Robert Mathewson, Miss Mathilde Weingartner, Mrs. Jacob Flatow, Mrs. John Dicke, Mrs. Edgar Sleight, Mrs. Robert E. Carew, Mrs. Willard M. Grimes.

Report of the Davis Collections

JOHN H. KOESTNER

The work of maintaining the Institute's extensive and valuable entomological collections, which goes on steadily at all times, now includes the generous gift from Mr. Howard Notman of insects, special boxes, and books on the subject. The Notman collection is most carefully and accurately arranged, and the problem was to combine it with the Museum's regular collection. This is being done as well as the overcrowded condition of the Museum's attic permits; and we visualize a day when we can say to the public: "Here is material for study and research equal to that of any large institution in the United States. Come, see and use it."

The many books on insects which were part of Mr. Notman's gift have been combined with the scientific books and papers collected by the late William T. Davis, and constitute a rich mine for the use of research workers.

HISTORY and LITERATURE

Report of Department of History and Literature

MABEL ABBOTT

An important piece of work completed by this Department during the year just ended is the arrangement of the George William Curtis Collection. This has been painstakingly done by H. Cleaver Brown, Research Associate. A description and study of this material will be published in a later number of the Proceedings.

Library

Outstanding among accessions to the Library have been the 1,000-volume collection of Howard Notman; 51 books and pamphlets from the library of the late Capt. Thomas I. Miller; and the source-material used by Walter B. Hayward in writing his highly successful book on Antarctic exploration. Other important accessions include the Kreischer family and business papers, gift of Miss Louise Kreischer; a valuable group of old deeds to land on Grymes Hill, dating back to 1835, the gift of John H. Gans; documents relating to the old firm of Barrett, Nephews & Co., and other genealogical material, the gift of Mrs. Clyde S. Babbitt; the consular appointment of G. J. Bechtel, signed by Abraham Lincoln, the gift of Miss Marguerite Bechtel; and a number of contemporary clippings and leaflets concerning George William Curtis and his daughter, Elizabeth Burrill Curtis, the gift of Miss Marian Holyoke.

Several Staten Island writers have enriched the Library by gifts of their latest books,—notably Miss Phyllis Whitney, Willard Grimes, Dr. Henry G. Steinmeyer and the Staten Island Poetry Society.

The Visitors' Book in the Davis House shows increasing use of our facilities for research.

The Institute's monthly Bulletin has been discontinued, and in its place a simple calendar is sent out, while the Proceedings,

which formerly was issued only every two years or so, now appears four times a year, in October, January, April and July. This permits a little more space for articles, and we hope, will make the Proceedings of wider interest.

The biography of William T. Davis has reached the stage of proof-reading and indexing, and should be out early this Fall.

Local History

Some original research has been done in the neighborhoods of Charleston (formerly Kreischerville) and Rossville, and the results have appeared in articles in the Proceedings.

Much interest has been shown in Elliott Burgher's studies of local Indian history. Mr. Burgher, who is Research Associate in Local Ethnology, has spoken on his subject to seven groups during the year, with a total attendance of 743 persons.

In-service courses in Local History have been conducted at the Davis House for two semesters, by Charles Coleman Stoddard. These have been extremely well attended and will be continued this Fall.

Periodicals

JOSEPH F. BURKE

The Museum has received during the year just closed, between eighty and ninety periodicals, largely as exchanges. Some are monthlies, some quarterlies and some annuals. As each arrives, the current number is placed in the rack at the Davis House and is there accessible until the next number takes its place. The back numbers are then filed in the attic of the Museum.

The large accession of entomological periodicals received in the Notman gift has been consolidated with those previously received in the Davis bequest. Duplicates have been sorted out with the help of Mr. Koestner and disposed of for the benefit of the Institute. These sets of periodicals on Insects have greatly broadened the scope of the library, for in past years, at the suggestion of Mr. Davis, no attempt was made to duplicate the sets in his library which he intended to bequeath to us. As our educational

institutions on Staten Island enlarge their activities, especially in the higher branches of scientific education, as more institutions on Staten Island engage in scientific research, and as more adults and students likewise pursue scientific studies through our Museum activities, this library that has been building for close to sixty years will be of great value to the community.

Section of Literature

ISIDORE DELSON

The Belles Lettres Society completed its 1948-1949 season on June 19, with its traditional picnic, held this year at the home of Mr. and Mrs. T. H. Philips, 199 Douglas Road, Emerson Hill. The following newly elected officers were installed: President, Dr. (Miss) Ida G. Everson; Vice President, Raymond M. Safford; Treasurer, T. H. Philips; Recording Secretary, Mrs. S. F. Howell; Corresponding Secretary, Miss Marjorie Sunderman; Historian, Lester Callan.

The Society celebrated the twenty-fifth anniversary with a dinner at the Richmond County Country Club, April 26, 1949. Among the forty-six who attended were two out-of-town honorary members, Mrs. Cecyl Grimes of Meadowbrook, Pa., and Mrs. W. L. Munger of Tioga, Pa.; also two former members, William Sunderman and Charles Kenny. The dinner arrangements reflected credit on the committee, which consisted of Walter Kuhn, Chairman, Roswell S. Coles, Leonard L. Sutter, Mrs. E. C. McCulloch, Mrs. Willard M. Grimes; also ex-officio Lester Callan and Colonel Grimes. The latter also served as master of ceremonies.

The first meeting of the season was held September 19, 1948, at the home of Mr. and Mrs. Isidore Delson, 324 Castleton Avenue; the October 24th meeting, at the home of Mr. and Mrs. T. H. Philips. This was Founders' Day and Miss Mabel Abbott showed writings and memorials of the late A. W. Callisen and William T. Davis. The November meeting, on the 21st, at the home of Dr. E. C. McCulloch, 94 Knox Place, was devoted to the American Novel in the Twentieth Century; Mrs. R. C. Bridgman, Chairman; participating, Mrs. Callan and Mr. Philips. The meeting scheduled for December 19 at the home of Mr. and

Mrs. Sutter, Pleasant Plains, was actually held January 2, 1949, because of the severe snowstorm which began December 19. Dr. Everson illustrated with color slides her description of her trip to England, Scotland and Northern Ireland. The regular January meeting, held on the 16th at the home of Mr. and Mrs. Coles, 37 Ellicott Place, continued the study of the American Short Story. Participants were Mrs. Dorothy D. Kuhn, Professor Robert W. Cumberland, Walter Kuhn and Colonel Grimes. The meeting of February 20, at the home of Dr. and Mrs. S. F. Howell, 44 Moody Place, was devoted to original contributions, under the chairmanship of Mrs. Sutter. Original work was presented by Miss Abbott, Mrs. Bridgman, Prof. Cumberland, Miss Alice Lawrence, Dr. McCulloch, Mrs. Kay Rogers, Colonel Grimes and his son Ralph. The subject of the meeting of March 20, at the home of Professor and Mrs. Cumberland, 61 Hillcrest Street, was American Poetry in the Twentieth Century. The guest speaker was Dr. Gustav Davidson, President of the Poetry Society of America and Curator of Poetry in the New York Public Library. The meeting of May 15th at the home of Mr. and Mrs. W. A. Lumsden, 5 Walnut Street, concluded the study of American Literature in the Twentieth Century with a program on American Biography under the chairmanship of Miss Dorothy Smith. Participants were Dr. and Mrs. Howell.

New members this season are: Mr. and Mrs. Leslie Carter and Mr. and Mrs. F. S. Jacobsen.

Mr. and Mrs. Mark B. Kerr have moved to Forest Hills, L. I., thereby becoming non-resident members.

The Society regrets to have to record the death of Miss Emilia Joan Schneider.

Report of the Fortnightly Club

GLADYS DOBSON

During the season just ended the Fortnightly Club has held 14 meetings each of which was held at the home of a member who was hostess for the day. The season's program has been most interesting and diversified: music, book reviews, and literature in various forms having been splendidly presented.

We sadly report the loss by death of two members: Miss Emilia J. Schneider and Mrs. Daniel D. Feldman. Both have been faithful members of the Fortnightly Club for many years and have contributed much by their participation therein. Mrs. Feldman was an honorary member and a Past President. There was one resignation because of moving from Staten Island, and we have one new member, making at present 23 active and 3 honorary members.

The annual meeting was held in May 1949, when the following officers were elected for the coming season: Mrs. Thomas Dobson, President; Mrs. Leonard Barrett-Smith, First Vice President; Miss Annie A. Davison, Second Vice President; Mrs. E. C. Rach, Recording Secretary; Mrs. John P. Dicke, Corresponding Secretary; Mrs. Christopher Steadman, Treasurer. Directors are: Mrs. David Elder; Miss Rosalie M. Packer; Mrs. Ivins S. Tanner; and Mrs. Robert W. Moller.

MUSIC

Report of the Department of Music

HARRY RUSSELL

The Music Department of the Staten Island Museum comprises two choral groups and several courses given by individual instructors. In sponsoring this activity, the Museum provides opportunities for education and recreation, and through the medium of lectures, concerts, and recitals, lends its aid to the desirable effort of spreading appreciation and the creation of a larger musical public in the Borough of Richmond. This work is carried on by Harry Russell, Conductor of the Oratorio Society, Director of The Westerleigh Players, Organist of the National Broadcasting Company; Miss Marjorie Sunderman, Director of the Treble Ensemble, Music Instructor in P.S. 14, Organist of Messiah Lutheran Church, Annadale; George Martin, Piano Instructor at Wagner College, Concert Pianist, Lecturer.

Fifteen lecture-recitals on "Viennese Piano Classics" were given in the fall of 1948 by Mr. George Martin. They were presented in the Museum on Thursday evenings at eight o'clock and in Public School 42 on Wednesdays at three-thirty in the afternoon. Works by Haydn, Mozart, Beethoven, Schubert, and Brahms were included in the series. Fifteen lecture-recitals on "Romanticism In Piano Music" were given by Mr. Martin in the Spring of 1949, at Public School 42 on Wednesday afternoons at three-thirty o'clock, and included works of Schubert, Schumann, Chopin, Liszt, and Mendelssohn.

These two series of lecture-recitals were attended by forty-eight students and teachers.



Harry Russell, Mirte van Pelt and W. N. Meyer rehearse for the Oratorio Society's summer concert, held on June 27.

Photo by S. I. Advance

Report of the Section of Music Staten Island Oratorio Society

WILFRED N. MEYER

During the past season, 1948-49, the society gave two concerts, both in the auditorium of McKee High School. On March 20th "The Messiah" was presented, all parts, with the following soloists: Mirte van Pelt, Soprano; Ruth Rothacker, Alto; John Phillips,

Tenor, and Carl Hinman, Baritone. The Cratorio was rendered in very good form by the mixed chorus of 28 voices. On June 27th the first presentation on the Island of Schubert's "Song of Miriam" was given, Mirte van Pelt being the soprano soloist. Other works of Bach, Tchaikowsky and German were sung by the chorus, and Miss van Pelt was heard in a group of songs. Mrs. Ray Kacik was the piano accompanist at both concerts.

In preparation for these concerts the society held rehearsals every Monday night in the Museum, except during July and August. The concerts and rehearsals were under the leadership of the society's conductor, Harry Russell.

At the annual meeting in May the following officers were elected and will take office in September: Leslie Carter, President; Ralph Goesle, Vice President; Mrs. Dorothy Hunt, Secretary; and Mrs. Elsie Cole, Treasurer. It was decided at this meeting to open the doors for qualified teachers to study choral singing with the society under the Museum's education program.

Report of the Treble Choral Ensemble

MARJORIE SUNDERMAN

The Treble Choral Ensemble, a group of twenty women, meets at the Museum for practice every Tuesday evening from September to June. They gather for the joy received in performing the best in choral literature for women's voices.

Officers of the organization are: President, Mrs. Howard Shadwell; Secretary, Mrs. Herman Methfessel; Treasurer, Mrs. Joseph Marzullo; Librarian, Mrs. Sherwood B. Seeley. Miss Marjorie Sunderman is Director of the group, and Mrs. Ray Kacik is accompanist.

Public performances this season included a program given at the annual Christmas concert of the Institute. The group also gave its annual Spring Concert on Tuesday, May 10, at the Richmond County Country Club for the benefit of The Needlework Guild. The season closed with a concert on Sunday, June 26th, at the Eltingville Lutheran Church for the benefit of the Church's organ fund.

PRINTS and PHOTOGRAPHS

Report of the Department of Prints and Photographs

DANIEL L. BRIDGMAN

The Museum is fortunate in having a large and valuable collection of photographs and prints relating to Staten Island, many of which are of historic interest and show the beauty of years that are gone.

Among the more important items received during the past year are:

Photograph of Dr. James P. Chapin, President of the Institute of Arts and Sciences, presented by Dr. Orrin Sage Wightman, F.R.P.S.

Framed photograph of George Cromwell, First Borough President. Gift of Alexander E. Light.

Eighteen stereoscopic views of Staten Island by Almstaedt.

Scrap book of illuminated store advertising cards, *circa* 1880. Gift of Mrs. A. W. Hoffmeyer.

Report of the Section of Photography (Staten Island Camera Club)

THOMAS J. FISHER

The Section of Photography as of May 1st began its 3rd year as a Section of the Institute, and the 15th Anniversary Year as the Staten Island Camera Club.

Mr. Frederic N. Adams, one of the three original founders of the Club, is still actively interested and participates in club and section activities. He is the Director of the course in Photography given at the Museum.

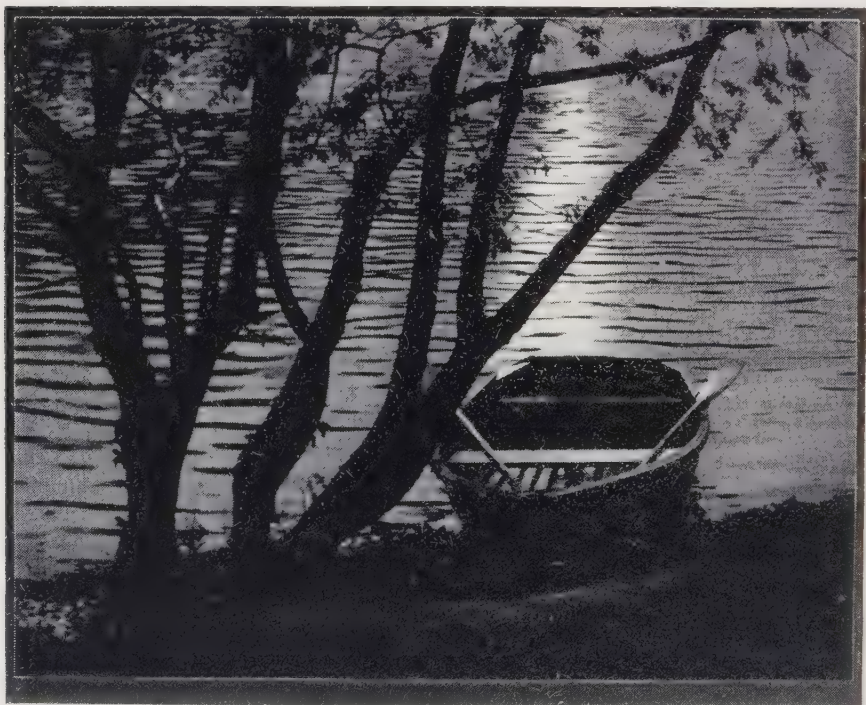
The Annual Meeting was held Wednesday, June 1st, at which time the election of officers took place, with the following being elected to serve the 1949-50 fiscal year: President, Michael Koledo; Vice President, Elliott L. Chapin; Executive Secretary, Joseph

A. Marzullo; Treasurer, Ferdinand Olson; Corresponding Secretary, Miss Vita La Marca.

The Section of Photography held meetings four times a month, with an average of twenty-four members and guests in attendance.

The monthly club publication "News and Views" was continued under the editorship of Frederic and Lucie Adams, with Thomas J. Fisher, the founder of the publication, in charge of distribution. The publication has received a great deal of favorable comment in other photographic publications. Many items of interest have been mentioned by them that have originally appeared in "News and Views."

A register was signed by members and guests at each meeting during the year to obtain statistical data concerning members, as well as the addresses of guests. Complimentary copies of the Club publication were then mailed to these guests, a procedure which has resulted in our gaining better than 10% in our membership.



"SPRING MORN"

Photograph by WILLIAM R. FLADER

Mr. Flader is the winner of the Class A competition, also the winner of the "Print of the Year" contest.

Speakers of outstanding caliber were obtained through the Metropolitan Camera Club Council's Speakers and Judges Bureau, as well as through personal contacts. Judges were secured for each of the monthly competitions, both for prints and for color slides. William J. Hunn was Program Director.

Winners in print competition were: Class A, 1st., William R. Flader; 2nd., William D. Sullivan; 3rd., Daniel Dennis. Class B, 1st., Mrs. Lucie Adams; 2nd., Elliott L. Chapin; 3rd., Miss Elizabeth Vosburgh. Color Slide: 1st., Frederic N. Adams; 2nd., Thomas J. Fisher; 3rd., (tied) Herman Gluck and Elliott L. Chapin.

The many awards which were received this year were presented to the winners at the Annual Dinner on June 25th at the Villa Restaurant in Stapleton. These included the Wallich Trophy won last year by Frank E. Gunnell and this year by Frederic N. Adams.

The new awards were a trophy for Class A Competition, three cups to become the property of each of the first place winners, and two trophies to the winners of the "Slide" and "Print" of the Year contests held in June. These awards were donated by Weitzman's Photo Shop as well as by John Picone, Frank E. Weitzman and Charles Saibene of that photo shop. Jaeger's Furniture Shop donated a plaque to the winner of "B" Print Competition.

Report of the Staten Island Philatelic Society

THOMAS A. WATSON

The Staten Island Philatelic Society met regularly on the second and fourth Mondays of each month, except the summer months of July and August. While meetings were largely devoted to the exchange of stamps among the members of the Society, a number of specialists in various fields of philately were invited to speak. These included such nationally known figures as Sylvester Colby specialist and dealer in United States stamps, and Julian Blanchard, expert in bank-note and stamp engravings.

In the exhibition field our society was very active. Six frames of stamps and covers constituted the annual exhibition held in May 1948. Mr. Henry Kraemer was asked in October 1948 to show about 100 photos of historical flights in cooperation with the airport exhibition.

In November and December our society cooperated with the S. I. Tuberculosis Society in the Christmas Seal Drive. Mr. Barry Hart, designer of the 1948 seal, attended our meeting and donated several autographed sheets of the seals for the winners. A graph showing seals from their inception to date, plus decrease in TB mortality, by Walter Kuhn, was photographed and received nationwide publicity.

A poster was placed in the foyer of the St. George Theater in connection with the Red Cross Drive.

Another activity in which our members are interested is the Halloran veterans' stamp club. Members Steve O'Brien and Bernard Lundin have been of great help to collecting veterans, who held their annual exhibition in the Hospital in March. Mr. Henry Kraemer was asked to act as judge and he presented philatelic pins to the prize winners.

An auction was held during the year with Clare Brown acting as auctioneer.

The annual Christmas party was successfully held under chairmanship of Harold Quale.

A one-week exhibition was held Feb. 8-15 in connection with New York City's Golden Jubilee celebration in the Museum. It was built around Elliott R. Burgher's display of the Staten Island express stamp issued in 1849. The display contained one of the few known used covers having this local stamp. It came from the world-famous "Count Ferrari" collection. The judges, three well-known philatelists imported for the occasion, were F. W. Kessler, Lou Charlat, and Julian Blanchard. They pronounced ours the best small exhibition they had seen. The Elliott Burgher award for philatelic knowledge was given to Mr. Kraemer, who, in addition to winning first prizes in the air-mail and Foreign Stamps fields, also was awarded a "Best in the Show" certificate for his showing

of German States. Other first prize winners were: Elliott Burgher, U. S. section; William McFarland, Novelty Group, and Thomas A. Watson, Best Page shown.

It was announced in September that our President, Mr. Robert W. Porter, had been obliged to resign his office because he had moved from the island. Vice President Eino Koski took over the Presidency for the rest of the term.

Our Treasurer of many years' standing, Mr. Henry J. Murray, announced at our annual meeting in April, 1949, that he did not wish to run for office again. With sincere regret the club acceded to his wishes. The following officers were nominated and elected unanimously: President, Thomas A. Watson; Vice President, William F. Hobbs; Treasurer, Alexander Findlay; Recording Secretary, John Ott; Corresponding Secretary, Miss Marion Pratt.

The President-elect took the chair at the next meeting, and appointed the following committee chairmen: Auction, Irving Baker; By-Laws, Walter Kuhn; Exhibition, Henry Kraemer; Membership, Elliott Burgher; Program, Walter Kuhn; Publicity, Eino Koski.

Letters were sent to all members urging them to become members of, or to procure members for, the Staten Island Institute of Arts and Sciences.

NEW MEMBERS

**We welcome the following who have become members
between March 10th and June 24th, 1949:**

Mrs. Irene Allan, Dr. Charles L. Allers, Mrs. John M. Avent, Dr. John R. Bacher, T. B. Bailey, Leo D'A. Balbach, Mrs. Lillian S. Barker, Russell D. Bell, Miss Dorothy Bonawit, Mrs. Vasa Bracher, John M. Braisted, Jr., H. Spencer Bregoff, Mrs. Lucy Buononato, Miss Annette L. Caffrey, Miss Edythe R. Caffrey, Leslie Carter, Mrs. F. J. Choynake, Mrs. Carl C. Clason, Mrs. William G. Connell, Angelo Constantino, Comm. James D. Craik, Miss Margaret C. Creech, Robert W. Cumberland, Miss Mary B. Curtis, Mrs. Aileen H. Dahl, Mrs. G. Herbert Daley, Mrs. Thomas J. Daly, Alex Danin, Mrs. A. R. Davidson, Mr. & Mrs. Thomas Dobson, Miss Sara Dolgin, Charles Dommer, Miss Diana Dunaisky, Henry Endress, Mrs. Ida J. Erickson, William S. Errington, Miss Vincenza Esposito, Miss Elizabeth Fanuzzi, Luke W. Finlay, Mrs. Karl A. H. Flail, Harry Fleisher, Mrs. Arthur Foley, Arthur O. Ford, Alvan L. Fowler, Jr., Norman C. Fromm, Mrs. F. J. Elliott Funk, Franklin M. Gay, Leonard B. George, Jr., Mrs. John Ghignone, Frederick B. Gilbert, William Griffin, Jr., Mrs. Jack Gronan, Mrs. Olav Gulliksen, Alfred N. Gundersen, Mrs. Mabel L. Hankinson, Mrs. A. Edward Harvey, John B. Hatton, Miss Mary Boswell Heard, Dr. Walter T. Heldmann, Mrs. Francis T. Henderson, Robert A. Hitch, Mrs. Bernard L. Holloway, Joseph Holzka, Dr. Louis M. Horowitz, Mrs. L. Waldo Horton, Frederick G. Huber, Mrs. John J. Huguenin, Miss Bertha A. Irving, Miss Edna M. Jackson, Mrs. Ruth M. Jansen, Oddie Johansen, Mrs. Ruby Johnsen, Richard O. Johnson, Hans Jovishoff, Mrs. Wm. C. Kelley, Mrs. Charles Keutgen, Dr. I. F. Klein, Mr. & Mrs. Alfred Klinksick, Henry Kraemer, Rev. Henry A. Kuehl, Mrs. Emerson P. Lambe, Mrs. Wm. C. Lancaster, Mrs. Francis L. Markey, Mrs. John G. Marr, Mrs. Mary Marrow, Henry Martin, Mrs. Robert Martin, James Matrullo, Joseph McCallion, Mrs. Ethel C. McDonnell, Mr. & Mrs. John McKinlay, Mrs. Alice McNeil, Wilfred Meehan, Mrs. Ralph Monell, Frank

A. Nolan, Arthur Notman, Peter Pacifico, Mrs. Gerald S. Parker, H. G. Parmele, Mrs. Elizabeth C. Parsons, Miss Sarah C. Parsons, Frank D. Paulo, Mrs. Philip C. Peck, Dr. Albert D. Pentz, Miss Helene Pfaltz, Charles A. Philhower, Miss Marion Pratt, Dr. Donald H. Race, Dr. Samuel Reback, Miss Helen Reddy, Jason D. Rich, Mrs. Fred F. Richardson, Harry Robillard, Alfred A. Rodeck, Thomas Rodgers, Mrs. J. E. Rogers, William Rogers, Roger Roughton, Mrs. Peyton K. Royal, Mr. & Mrs. Henry N. Russell, Mrs. Marion H. Russell, Dr. John G. Savarese, Miss Katherine B. Seeley, Dr. Isidore Scheinberg, Mrs. Edwina Schmeidler, Dr. Fred W. Schmitt, Daniel M. Schneider, Friederike Schwarz, Moses B. Sorola, Robert E. Strawbridge, Jr., J. D. A. Sullivan, Jeremiah A. Sullivan, Mrs. Carl J. Sutter, Mr. & Mrs. James Talbot, Sedward M. Taylor, Edward A. Terry, Samuel A. Turvey, Nils A. Valby, Mrs. Gerard Vanderzee, Elmer G. Van Name, Mr. & Mrs. Roger Vernam, Mrs. Anita Volz, Miss Edna R. Vought, James R. Walsh, Charles F. Watters, W. Stevenson Watson, Frank E. Weitzman, L. W. Widdecombe, Max Wiesner, Mrs. Lucie Wuyts, Miss Alice Zinser.

FORM OF BEQUEST

I hereby give, devise, and bequeath to the Staten Island Institute of Arts and Sciences, Staten Island, New York, the sum of to be used, (or the income from which to be used) for the work (or a specific purpose) of the Institute.

Signature
 Address

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PROCEEDINGS of the
STATEN ISLAND INSTITUTE
of ARTS and SCIENCES



VOLUME XII

NUMBER 1

October, 1949



City Officials visit the model apartment in the South Beach Housing Project, on the occasion of the laying of the cornerstone. Left to right: Roswell S. Coles, Director of the Staten Island Museum; Councilman Fred Schick; Alice Reichenbach, Director of Public Relations of the Museum; Borough President Cornelius A. Hall; Mayor William O'Dwyer.



Frank Gunnell making our new motion picture, "It's Your Museum," which had its first showing at the Open House, October 9.

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PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES, Vol. 12, No. 1, October, 1949. Published quarterly in October, January, April and July, by the Staten Island Institute of Arts and Sciences, 75 Stuyvesant Place, Staten Island, N. Y., and entered as second class matter at Staten Island, N. Y., under act of August 24, 1912. Mabel Abbott, Editor.

Early Records of the Rocks and Minerals of Staten Island

ROSWELL S. COLES

These early Staten Island records have been compiled as a part of a study of our serpentine rocks recently undertaken by Messrs. Ashby, Burke, Coles, Ellison, Siemer and Thein of the Museum Section of Microscopy (the Staten Island Microscopical Society). The study indicated the need for a search through early scientific literature which I undertook as my contribution to the group effort. Publications examined are listed in Appendix I. The study has been facilitated by the two bibliographies of geologic literature published by the U. S. Geological Survey (Bulletins 746 and 747) and by the *Bibliography of American Natural History* by Max Meisel. I have received valued help from a number of libraries including the New York Public Library, the American Museum of Natural History, the Kings County Medical Association and the geology library in Schermerhorn Hall, Columbia University. In particular I am indebted to Joseph F. Burke, President of the Staten Island Microscopical Society and Lee A. Ellison, Past President of the Section of Natural History, for their generous technical assistance.

Part I

The period following the Revolution witnessed a rapid development of the sciences in this country. The broad panorama of this early history lies beyond the range of this report but for it one may refer to such works as G. P. Merrill's, *The First Hundred Years of American Geology*, or to George Brown Goode's, "Beginnings of American Science."⁽¹⁾

The fields of geology and mineralogy were explored by a number of men, many of them physicians who brought back from their tours abroad some of the enthusiasm of the great pioneer scientists of Europe. Two of these, Dr. Samuel L. Mitchill and Dr. Archibald Bruce, with their respective proteges, Samuel Akerly and James Pierce, are responsible for our earliest Staten Island records.

While Mitchill was the older and more eminent, the honor of publishing the first scientific record from Staten Island goes to Bruce. This is a discovery of an oxide of titanium, isolated speci-

(1) Merrill, G. P., *The First Hundred Years of American Geology*, Yale University Press, 1924.

Goode, Samuel Brown, "The Beginnings of American Science," in the *Annual Report of the Board of Regents of the Smithsonian Institution*, 1897, p. 422.

mens, presumably from the glacial drift, unearthed at the fortifications at the Narrows. They were described by Bruce in Paper XXXVII of the *American Mineralogical Journal* which he founded and edited.⁽²⁾

No. 4

"Silico-calcareous oxide of Titanium in color and figure similar to No. 2 (from Ticonderoga) imbedded in compact opake felspar, with dark green hornblende.

No. 5

"The same imbedded in dark green hornblende.

No. 6

"The same crystals of the largest size, in a matrix composed of yellowish green compact felspar, which appears to derive its colour from the hornblende, with which it abounds, and into which indeed, it appears to pass.

"These specimens, Nos. 4, 5, and 6, are from Staten Island, and were presented to me by Drs. Pierce and Bloodgood, of this city. They were found by these gentlemen in a large insulated rock mass, which was thrown out at the site of Fort Richmond, when the works were first commenced."

This silico-calcareous oxide of titanium is listed in Dana's System of Mineralogy as Titanite, a name derived from the "titanit" of Klaproth in 1796. Bruce used the name derived from the French Scientist, Daubenton, who referred to it in 1799 as "Titane siliceo-calcaire." Its more common name is sphene. A difficulty in nomenclature occurs since at about the same time the Irish scientist, Kirwan, used the name to describe the simple oxide of titanium which we know as rutile.⁽³⁾

The fortifications at the Narrows appear to have been the collecting place for all our early records and it is fortunate that in our next record we have a splendid contemporary description of the area along with mineralogical notes. This occurs in a report by Samuel Akerly, "our first resident naturalist" of whom more will be said in part II of this report. During the War of 1812 he was a hospital surgeon in the U. S. army, and his paper bears the somewhat quaint title, "Medical Topography of the Military Positions in the third United States Military District: together with a summary Report on the Diseases of the Army, from the Commencement of the War, in 1812, to its Termination, in 1815; embracing also the mineralogy of the surrounding country."⁽⁴⁾

"The south-east point of the island is occupied as a military position, commanding the channel and bearing upon an enemy advancing between the east and west banks. Fort Tompkins is a

(2) Vol. I., 1814, p. 240.

(3) Sixth edition, p. 712.

(4) *Medical Repository*, Samuel L. Mitchill, ed. New Series, Vol. III, 1817, p. 293.

pentagonal stone work erected on the height above all the other works, commanding the whole. The principal battery called Fort Richmond is a double platform, en barbette carrying fifty-two guns. "The water battery, or Fort Hudson, is a semicircular covered work of masonry, mounting twenty-seven guns beneath the others, on the margin of the river.

"This is a charming position as respects the salubrity of the air, agreeableness of the prospect, and the healthiness of the place. Pure and wholesome water is obtained from the wells on the hill and the springs issuing from the foot of it. There are no large fens or marshes near the position to render it unhealthy . . ."

The first reference to our serpentine rocks then occurs:

"The hills in the center of the island are composed of magnesian rocks, of steatites or soapstone. Chromate of iron, massive and granular, is found disseminated through it but in no great quantity. It sometimes forms small crystals, with numerous sides, which have not been determined by the naked eye, though probably of the octaedral form like those found near Baltimore. The soap-stone of the adjacent state of New Jersey, and detached portions found on Long Island, also contain these forms of chromate of iron. The higher parts of this island may be arranged with the floetz formations of New Jersey."

The chromate of iron, now called chromite, is still found sparingly on the island.⁽⁵⁾ The reference to the floetz formations is the first record of an attempt to assign a classification to our island rocks; but it is incorrect. This was one of the five groups, as set forth by the "father of German geology," Werner, who had a great influence on Mitchill's thinking: primitive, transition, floetz (including sandstones, limestone, chalk, etc.,) transported, and volcanic ejecta. As we shall see below, Pierce was nearer the truth in considering our hills as "primitive," although their age has never been satisfactorily determined.

Akerly concludes his description of Staten Island with a reference to the glacial till, which, of course, he did not recognize as such. The prevalent explanation for this phenomenon was that it resulted from a "catastrophe," generally believed to be the Biblical flood of Noah's time. The reference to the well at Fort Tompkins is of interest as this area is a part of the terminal moraine and abounds in rocks and boulders. The native copper was noted by Arthur Hollick in connection with a further find on Grymes Hill in 1903.⁽⁶⁾

"The remaining portion of Staten Island, including its level portion and some of the smaller hills, appears to be alluvial, and composed of sand of various consistence, from fine beach sand to gravel, and earth mixed with stones and rocks. In the center of Fort Tompkins, on the southeast point of the island, is a well exceeding one hundred feet; in digging of which nothing but sand was raised, and the labour was easy and unobstructed by strata of any kind to its greatest depth. Some small specimens of native copper were

(5) Dana, *ibid.*, p. 228.

(6) Proc. Nat. Science Assn. of S. I., Vol. IX, p. 44.

found in the sand when removing the hill to establish suitable positions for the artillery, but they afforded no traces of larger quantities."

Samuel L. Mitchill's one contribution to our local mineralogy came, in part at least through Akerly, who was his brother-in-law.⁽⁷⁾

"The south side of Staten Island resembles Long Island. Carbonated wood, pyritical coal, and other organic remains, have frequently been discovered by digging wells. At the Narrows, where fortifications and beacons are, several pieces of native copper were found by the laborers on the works. Over other parts iron ore is scattered."

The carbonated wood and pyritical coal refer to the Cretaceous lignite deposits which occur in scattered areas along the south and west shores, material discussed more at length by Akerly in 1820. The iron ore later developed into one of Staten Island's major industries as recorded in a typed thesis: "The Geology of the Vanished Limonite Mines on Staten Island," by Irving Glazer, and in the *Staten Island Historian* by Raymond Safford.

In these early years there was little specialization in the sciences and Mitchill's geological writings and mineralogical notes are interspersed among other writings, particularly in the *Medical Repository* of which he edited all but the last two volumes. He discussed many subjects including the serpentines and nearby areas such as Hoboken and Long Island but he seems to have ignored Staten Island almost completely as a mineralogical location.

The major work on Staten Island during the period under discussion was done by James Pierce who obtained the specimens of titanite for Bruce. Bruce's biographer at the time of his death spoke of him as kindly seeking out and encouraging the young mineralogists of his own country and I like to think of him as a little like our own William T. Davis.⁽⁸⁾ Perhaps Pierce and Bloodgood were two of these "young men." If so, nothing seems to be known of Bloodgood but Pierce continued to work in the field and became the author of several papers including one we may consider as the first Geology of Staten Island.

Since Pierce is apparently the "Father of Staten Island Geology" it seemed important for the record to accumulate as much information about him as possible. Unfortunately little biographical material remains. His papers were published for the most part in the *American Journal of Science* and those indexed were included in the "Geologic Literature on North America" in Bulletin 746 of the U. S. Geological Survey. Bruce refers to him as "Dr." but elsewhere he appears as "Mr." or "Esq." and it seems doubtful

(7) Mitchill, S. L., "Observations on the Geology of North America," appended to the American Edition of Cuvier's *Essay on the Theory of the Earth*, 1818, p. 383.

(8) *American Journal of Science*, Benj. Silliman, ed. Series I, Vol. 1, p. 299.

that he was a doctor. His descriptions of Staten Island and its minerals show considerable scientific training which he utilized in his various travels throughout the country. In the *Bibliography of American Natural History* Meisel speaks of him as the President of the Catskill Lyceum of Natural History in 1823 and in 1820 he became one of the original members of the American Geological Society in New Haven and a member of the publications committee. After 1827 he drops out of sight but in 1842 he wrote a letter to the secretary of the Tompkinsville Lyceum on Staten Island which found its way into Anthon's "Notes" and was published in our Proceedings in 1924. In this letter he speaks of "your island" and it is doubtful that he ever resided here. A list of references to Pierce appears as Appendix II.

Pierce's first Staten Island note was published in the first volume of the *American Journal of Science*⁽⁹⁾ and noted by Hollick in our *Proceedings* of December, 1893.

"I forward you specimens of straw and rose-coloured amianthus I recently met with on Staten Island, which I detached, in strips, from a rock; it not appearing, as usual, in veins. It breaks up like flax, and may be spun and wove without the aid of moisture; and in respect to tenacity, flexibility, and length of fibre, it may be considered the best found in this country, and perhaps equal to any hitherto discovered, Staten Island exhibits many minerals worthy of examination. I subjoin, as requested, the following geological description, &c."

On page 55 under "Remarks" the following is recorded.

"The specimen of amianthus, referred to in Mr. Pierce's communication, is uncommonly beautiful. The fibres measure 12 and 15 inches in length, and are soft and flexible as fine human hair."

We have some difficulty identifying this amianthus exactly. Asbestos and amianthus are used in a general way as a name for all fibrous minerals including the serpentines, but technically they are assigned to the amphibole group which includes tremolite and actinolite.⁽¹⁰⁾ These minerals have been found here, but not in fibrous form, the nearest being a specimen of "mountain leather" which was discovered by B. B. Chamberlain in 1883.⁽¹¹⁾ However, there are tons of the serpentine "asbestos" here; it was even mined, experimentally, for Johns Manville about 1890. It seems probable that Pierce's amianthus is our fibrous serpentine, and if so, this is our first scientific record of it.

The "Geological Description" appears in the same volume of the *Journal*, on page 142. This is preceded by a report of a "new

(9)Series I, Vol. I, p. 54, May 18, 1818.

(10)Dana Sixth ed., p. 389.

(11)Transactions of the N. Y. Academy of Science, Vol. III, 1883, p. 49.

form and locality for carbonate of magnesia" which had previously been reported from Hoboken where the early work on the serpentines and allied minerals had been done. The Quarantine was situated at that time at Tompkinsville. Anthon extracted the Staten Island records from this volume of the Journal.

"I forward you a few mineral specimens characteristic of Staten Island, including native carbonate of magnesia, in acicular crystals. I discovered this new form and locality of magnesia in examining the strata exhibited in an excavation now making, under the delusive expectations of finding gold, about three miles from the Quarantine. In descending the shaft, sunk perpendicularly in steatite, magnesite, veins of talc, and green translucent asbestos were observed at depths from six to thirty-five feet. The magnesite was found to embrace veins and cavities containing carbonate of magnesia, in very white acicular crystals, grouped in minute fibres radiating from the sides, but not always filling the veins and cavities. The crystals were, in some instances, suspended, assuming a stalactical form. This carbonate of magnesia dissolves entirely in diluted sulphuric acid, with considerable effervescence and chemical action, producing a bitter compound, from which salts of easy solution are formed by evaporation. The magnesite in which these crystals are found, appears to be composed of carbonate of magnesia, steatite, and talc, disintegrating readily upon exposure to air and moisture: it effervesces considerably in sulphuric acid, forming a very bitter fluid that soon exhibits crystals, indicating that magnesia enters in large proportion into its constitution. Magnesite may perhaps be found at this place in quantity sufficient for a successful manufacture of Epsom salts. Small regular hexadral crystals of mica, were noticed in steatite. Chromate of iron was sparingly diffused through the different minerals raised from various depths."

There is an interesting modern footnote to the reference to Epsom salts. This bitter magnesium sulphate was reported as occurring naturally as epsomite on Staten Island by Robert McCulloch in our *Proceedings* of October, 1937, and in the *Museum Bulletin* of February, 1946, Mr. and Mrs. Carleton Siemer traced its genesis to the sulphur laden fumes from New Jersey combining with the magnesium derived from our serpentines. In the light of the interest in our "smog" as recorded currently in the *S. I. Advance* it appears that Museum mineralogists are an outstanding example of those few Staten Islanders for whom the "ill wind" blows good.

Pierce continues with a "few remarks and facts respecting the geology and mineralogy of Staten Island." It will gratify our egos, no doubt, to read of our "mountain range" which though, as is claimed, it may be the highest on the coast from Maine to Florida, rises at its highest peak to only 413 feet above sea level.

"Staten Island (which constitutes Richmond County) is situated about seven miles southwest of the City of New York, extends from northeast to southwest about fifteen miles, in a straight line with an average width of six. It exhibits a considerable diversity of surface. The eastern part is composed principally of elevated

ground; a mountain chain is observed to take its rise in the vicinity of a narrow sound called the Kills, and sweep in a semicircular form, near the eastern shore; it then ranges southwest, parallel with, and distant from Amboy Bay, about two miles, terminating near the center of the island, and forming, with the exception of some passages, a continued chain, which, on the eastern and southern sides, is very steep, but not precipitous; it gradually declines to the west and north, and, in some places, it presents on its summit tableland of considerable extent. A prominent ridge crosses the island, connecting the elevated ground of the south, with the hills of the northern part. A species of steatite, containing veins of common, indurated, and scaly talc, amianthus, and most of the varieties of asbestos, and some chromate of iron, constitutes the nucleus of the whole mountain range and elevated ground of the eastern division, stamping it as primitive. This steatite approaches, in most places, within a foot and a half of the surface, and appears in small angular loose blocks, wherever the soil has been removed. Its colour is a greenish yellow; it is brittle, very adhesive to the tongue, but little unctuous, and probably contains more alumine and less magnesia than steatites in general. Much of it decomposes when exposed to air and moisture, and forms a good mould, whenever the descent of ground permits an accumulation of earth. It is not improbable, that in most places of the Staten Island hills, when magnesia constitutes a considerable ingredient of the rock, it will be found saturated with carbonic acid, obviating the objection to common magnesian minerals in agriculture."

In reference to this last, Parker Cleaveland notes in his *Elementary Treatise on Mineralogy and Geology* (page 346) that earths which contain any considerable quantity of magnesia not saturated with carbonic acid are injurious to vegetation. Lee A. Ellison has made an extended study of our Staten Island water including the presence of CO_2 which was published in our *Proceedings* in April, 1949.

Greenstone is our trap rock or diabase; the "uncommon mineral" is presumably the quartz remnants of decomposed iron ore, of which we have several specimens from that section of the Island. The brown hematite is more likely limonite as hematite is rare here, but his description of the various forms of iron ore shows careful observation.

"The minerals observed on the surface of the northeast part of this chain of hills are, secondary greenstone, asbestoid, sandstone, granite, and gneiss, sparingly scattered in rolled masses. In addition to these rocks, in the middle and western part of the chain, a mineral of uncommon appearance is observed. It is composed principally of quartz roughly with numerous cells of various forms, in which small siliceous crystals are generally found: the veins or plates of quartz that intersect each other, often embrace talc and oxide of iron, which decomposing, gives some specimens the appearance of volcanic origin. Associated with this cellular ferruginous quartz, brown hematite is often observed; this valuable ore often yields eighty per cent of iron of best quality; its fibres assume a variety of shapes; they were observed at Staten Island, straight and curved, radiating from a centre, and exhibiting the stalactical, cylindrical, and botry-

oidal forms, often displaying a black polished surface and glistening lustre. Ferruginous minerals are abundant on the mountain for several miles. A granular oxide, called by miners shot-ore, from its being principally composed of spherical grains of various sizes, was often noticed, and appears in some places in extensive beds: it is easily fused, and affords a large percentage of good iron castings. A heavy ore, with a smooth surface and some lustre, bearing a considerable resemblance to native iron, is sometimes seen."

Pierce then goes on to describe several interesting features. He apparently discovered the section near the Richmond County Country Club which is noted for having escaped glacial action. The gravel has been studied by Hollick and referred to the Tertiary, but it seems more probable that it is interglacial in origin. The question raised by the presence of sand and gravel on our highest hills as to the possible inundation of the Island has never been settled and the whole story connected with our gravel needs more study. The copper ore has been mentioned under Akerly's notice and the "petrifications of marine shells" are fossils from the seas which occupied central New York state during Paleozoic times some hundreds of millions of years ago.

"Banks of white sand, resembling the siliceous particles of the seashore, are noticed on the mountain tops, containing masses of compact, heavy ferruginous sandstone, similar to the rocks of our alluvial seaboard. Large beds of water-worn siliceous pebbles, in no way differing from those washed by the ocean, are seen on the height of the ridge, in which excavations have been made several feet, leaving the depth of the mass uncertain. On some of the eminences, for a considerable extent, vegetation is entirely excluded by an iron soil. Iron ore imbedded in an earth coloured by, and partly composed of, oxide of iron, occupies the surface; and the chalcedony and radiated quartz are sometimes observed on the primitive ridges. Prospects from many of these eminences are extensive and diversified. On one side, the ocean and a great extent of coast are in view; on the other, a rich landscape of hills and plains, the eye resting on the highland-chain and the mountains bordering Pennsylvania; the harbour, at your feet, presents a busy, ever varying scene, and the city of New York appears to great advantage from this point of observation.

"The district between the mountains and the narrows, the thickly settled and well-cultivated plain bordering Amboy bay, and much of the western division of the island, are decidedly alluvial. Adjacent to Fort Tompkins, detached pieces of copper ore have been found. I have observed petrifications of marine shells in rocks excavated in that neighborhood, twenty feet from the surface, and sixty above the ocean."

Pierce concludes his account of Staten Island with a description of the western side. In finding "no large beds of rock" he seems to have missed the trap rock which extends on Staten Island as a continuation of the Hudson River Palisades. This is the dark rock which was quarried extensively until the early 1900's and still may be seen in many an Island wall and house. The lignite is a continuation of the deposits mentioned by Mitchill and the chalybeate or iron spring was probably the "mineral spring" in New Springville, noted by Anthon and more fully described by

Lee A. Ellison in the *Museum Bulletin* for February 1946, and as indicated above in his article on water in our *Proceedings*.

"The western part of the island presents moderate elevations; the soil, a good medium of sand and clay, is in general fertile; but a tract near the termination is sandy and barren. Some creeks penetrate to near the center of the island, and are bordered by extensive salt meadows. Except at the primitive range, I have observed in no part of the island large beds of rock that can be called in place; but rolled masses of greenstone, sandstone, gneiss, granite, red jasper, and indurated clay appear in general sparingly, but sometimes in abundance on the surface. Lignite has been found in small quantities in the western part of the island. A Chalybeate spring, of no great strength, is the only mineral water met with in Richmond county. The ponds, wells, and streams contain a soft water, holding no lime in solution."

In conclusion, we must pay tribute to Pierce for his early discoveries. The physical labors alone are worthy of our admiration as they were made at a time when the Island was rural indeed. Yet he was able to gather a surprisingly good list of our rocks and minerals which, through publication in the *American Journal of Science*, brought Staten Island to the attention of the leading men of the day and laid the base for further studies. Some of these, particularly those by Samuel Akerly, will be discussed in the January issue of the *Proceedings*.

Early Records of the Rocks and Minerals of Staten Island

Appendix I

List of works consulted (1785-1820)

- 1785-1818 *Memoirs of the American Academy of Arts and Sciences*,
Boston.
- 1787 *Observations Anatomical, Physiological, and Pathological, on
the Absorbent Tubes of Animal Bodies, to which are added
Geological Remarks on the Maritime Parts of the State of
New York*, by Samuel L. Mitchill.
- 1797 *Medical Repository and Review of American Publications on
Medicine, Surgery, and the Auxiliary Branches of Science*,
edited by Mitchill and others.
- 1801-1816 *Transactions of the Society for the Promotion of Agriculture,
Arts and Manufactures, and its successor, the Society for the
Promotion of Useful Arts.*
- 1809 *Observations on the Geology of the U. S.*, by William Maclure,
in *Transactions of the American Philosophical Society*, Phila-
delphia, Vol. 6 pt. 2, No. 62, p. 411, et seq.
- 1810 *A Concise Description of Schooley's Mountain in New Jersey*,
by Samuel L. Mitchill.
- 1816 *An Elementary Treatise on Mineralogy and Geology*, by
Parker Cleaveland.
- 1817 *Journal of the Academy of Natural Sciences of Philadelphia.*
- 1817-1819 *The American Monthly Magazine and Critical Review*, H.
Bigelow, ed.
- 1818 *Observations on the Geology of North America*, by Samuel
L. Mitchill, in *Cuvier's Essay on the Theory of the Earth*.
- 1818 *The American Journal of Science*, Benjamin Silliman, ed.

Early Records of the Rocks and Minerals of Staten Island

Appendix II

References to "Staten Island's first geologist," James Pierce.

Those listed in the U. S. Geological Survey Bulletin number 746 are noted with an asterisk (*).

- 1814 (?) Collects specimens of "silico-calcareous oxide of Titanium" from Fort Wadsworth area. *Am. Min. Jour.* I:240.
- 1817 "Mr. Pierce read to the Society (N. Y. Lyceum of Natural History) a narrative of his excursion to the Catskill Mountains giving the natural history and topography of that district of the country." *Am. Monthly Mag.* I:195.
- 1817 "Mr. Pierce read a memoir on the geology and mineralogy of Rockland County, etc." *Ibid.* I:453.
- 1818 Carbonate of Magnesia and very uncommon amianthus discovered near New York. *Am. Jour. Sc.* I:1:54-55.*
- 1818 Discovery of native crystallized carbonate of magnesia on Staten Island, with a notice of the geology and mineralogy of that Island. *Ibid.* I:1:142-146*
- 1820 Geology, mineralogy, scenery, etc. of the secondary region of New York and New Jersey and the adjacent regions. *Ibid.* I:2:181-199.*
- 1820 Pierce listed under officers of the newly formed American Geological Society, New Haven, Conn., as one of three members of the committee of publication. *Ibid.* I:2:141.
- 1820 Communicates kaolin from Weehawken, *Ibid.* 1:2:368. Torrey says prehnite discovered by Pierce at Paterson is datholite or siliceous borate of lime. *Ibid.* I:2:369.
- 1820 A Chalybeate spring at Litchfield, Conn. *Ibid.* I:3:235.
- 1822 Geology, mineralogy, scenery, etc. of the highlands of New York and New Jersey. *Ibid.* 1:5:26-33.*
- 1822 Catalogue of Rocks and Minerals (including S. I. specimens) presented to the American Geological Society. *Ibid.* 1:5:265.
- 1823 A memoir on the Catskill Mountains. *Ibid.* 1:6:86-97.*
- 1823 Notice of the alluvian district of New Jersey. *Ibid.* I:6:237-242.*
- 1825 Notices of the agriculture, scenery, geology and animal, vegetable and mineral productions of the Floridas. *Ibid.* I:9:119-136.*
- 1826 On the shell marl region of the eastern parts of Virginia and Maryland and upon the bituminous coal formation in Virginia and contiguous region. *Ibid.* 1:11:54-59.*
- 1827 The mountain districts of Pennsylvania and the mineral resources of that state. *Ibid.* I: 12:54-74.*
- 1828 Mentioned by Mitchill in his lecture on some parts of the natural history of New Jersey delivered before the Newark Mechanic Association for Mutual Improvement in the Arts and Sciences, June 3, 1828.
- 1842 Letter to the secretary of the Tompkinsville Lyceum, March 14, 1842 on the geology and mineralogy of Staten Island. *Proc. S. I. Inst. Arts and Sciences*, III:49.

The Curtis Collection

H. CLEAVER BROWN

George William Curtis was born in 1824 in Rhode Island, and died in 1892 on Staten Island. He became a resident here in 1856, settled at West New Brighton, and until his death was one of our leading citizens, and well known the nation over as an author, editor, speaker and reformer. He was a powerful advocate of Civil Service Reform and of Woman Suffrage. In politics he called himself an Independent, although he was a member of the Republican Party. In 1884, when Blaine was a candidate for President, he broke his association with that party.

The Staten Island Museum's collection of Curtis material at present includes an almost complete set of his published books; some memoirs published in books by other authors; newspaper and magazine articles concerning him; and large numbers of addresses and orations between 1856 and 1892 in pamphlet form. There are also a number of pamphlets on Staten Island subjects, not political in nature, not written by him but which he preserved in his library, and a good collection of the memorial addresses made by prominent men after his death. Particularly interesting to students are a number of manuscripts found in his library. These seem to be notes prepared for articles and speeches. There are also galley proofs of some of his speeches, with revisions in his own hand.

Probably the most interesting single item to residents of Staten Island is a resolution, made out in duplicate so that it could be passed around more quickly to secure signatures. This resolution protests against the acceptance by the Richmond County Republican Committee, of Mr. Curtis's resignation as Chairman. The signatures are a roster of Island names well remembered by many persons still living here.

The collection will repay the attention not only of students of Mr. Curtis, his work and times, but of all who are interested in the period in which he lived and wrote.

Breeding Bird Survey, Staten Island, Spring 1949

MATHILDE P. WEINGARTNER

In an attempt at a more accurate record of the birds nesting on Staten Island the Census was extended over a period of a month, from May 30 to July 1. As some birds are known to nest even before the end of May, some earlier findings are also included in this survey. An attempt was made to find the nests of birds that had been observed in former years to spend their usual nesting time on our Island.

The four observers able to take part in this census were: Howard H. Cleaves, Lee A. Ellison, Casimir Redjives and Mathilde P. Weingartner.

Following is a list of the 87 species and some comments on nesting observations:

Pied-billed Grebe: Casimir Redjives reports seeing 1 bird in Claypit Ponds in late June or early July. This may indicate that they bred there as they did in 1948 when they were observed by Mrs. Carol Stryker.

Green Heron: Present as in preceding years at Prince's Bay, Green Ridge, Great Kills, and Lemon Creek.

Black-crowned Night Heron: One male in breeding plumage observed at Walker's Pond, Egbertville.

American Bittern: Reported by Casimir Redjives.

Least Bittern: One seen at Claypit Ponds, Green Ridge, May 29. Probably breeding. The presence of these birds was discovered by Mrs. Stryker in 1948.

Mallard: Seen at Huguenot Park and one or two other localities, indicating that the species is breeding on the Island, though not in numbers.

Black Duck: Two females with broods of about 10 ducklings each were seen by Casimir Redjives at Oakwood Beach.

Blue-winged Teal: A pair of this species was observed by Redjives during the spring but no evidences of breeding were found.

Wood Duck: Three pairs were flushed from a hidden pond near Hylan Boulevard in early April. No nests or broods were discovered but it is assumed that the species continues to breed on the Island, though some of the birds seen in April may have passed on to breeding localities further north.

Turkey Vulture: The birds have been observed soaring above the Island during Spring and early Summer, but no nests have so far been found.

Cooper's Hawk: One seen July 11 in Scout Camp Woods near Egbertville. This bird has bred on the Island near Pleasant Plains, but because of its secretive habits, nests are hard to locate.

Broadwinged Hawk: George Wilmott reports having seen this bird in flight above his home on Amboy Road in June: however, there are no breeding records for the Island.

Marsh Hawk: Redjives and Cleaves report seeing a Marsh Hawk coursing above the salt meadows at Oakwood Heights. This species has not been reported nesting since 1916.

Osprey: Two individuals were seen courting in the air above Wolfe's Pond. A pair of Ospreys built a nest in a tall tree in Ocean View Cemetery in 1907 or 1908, but there is no record of an attempted nesting since.

Sparrow Hawk: A pair appears to have been nesting in one of the buildings of the S. S. White Dental Works, Prince's Bay, this season. The species is present in many parts of the Island, and breeds, though no nests may have been found.

Ring-necked Pheasant: This bird was seen by all observers, in Mt. Loretto, Buck's Hollow, Spring Street valley, and other localities.

Clapper Rail: Casimir Redjives reported seeing this bird in a small patch of Salt marsh in Great Kills Park, but it is not known whether this bird nested here this year.

Virginia Rail: Cleaves and Redjives observed an individual of this species, as the bird fed in an open area among Phragmites south of Mill Road, Oakwood Heights, but no nest was seen.

Killdeer: Many pairs nested at Oakwood Beach, and two pairs in Sailors Snug Harbor cornfield.

Piping Plover: Cleaves and Redjives observed four individuals of this species in Great Kills Park, on May 30th. From then on until July 10 Cleaves observed Piping Plovers in courtship, or acting as if they had eggs or young.

Woodcock: The courtship flight of the males was observed near Richmond Ave. and Hylan Boulevard, Richmond Avenue and Drumgoole Boulevard, South Avenue and Lambert's Lane.

Spotted Sandpiper: Individuals of this species, acting as though they had nests or young were seen at Oakwood Beach by Cleaves and Weingartner. Cleaves also observed them at Claypit Ponds.

Herring Gulls: No nests of this gull have been found on Oakwood Beach this year, as the area frequented by gulls at the beach has been "developed" as a bathing beach.

Great Black-backed Gull: Only immature birds were seen during the breeding season.

Least Tern: Cleaves, Redjives and Weingartner heard and saw four Least Terns dipping over Oakwood Beach May 30, but there is no indication that this bird nested here this year.

Mourning Dove: Ellison and Weingartner saw and heard these birds in Moravian Cemetery and at 960 Fingerboard Road. Cleaves heard them cooing and starting to nest at Pleasant

Plains on May 3. A pair also nested near Bard Ave. and Linden St.

Yellow-billed Cuckoo: All observers heard this bird in various parts of the Island.

Barn Owl: Birds heard crying in flight at night several times during spring by Cleaves. No nest has been found on the Island for some years now.

Screech Owl: Cleaves heard and saw the bird in Pleasant Plains, Ellison heard it at Haven Esplanade, and Weingartner in Livingston.

Whip-poor-will: Cleaves heard this bird in Pleasant Plains, Eltingville, Greenridge and near Page Ave. and Weingartner and Ellison heard it on South Ave.

Chimney Swift: All observers reported Chimney Swifts in considerable numbers.

Ruby-throated Hummingbird: Seen by Redjives along Betty Holmes Brook. Probably breeds here but in small numbers.

Kingfisher: A pair often flies up and down Sailor's Snug Harbor brook and may be nesting on the bank of the Kill Van Kull. Cleaves also heard it in Prince's Bay, where it may be nesting on the steep banks of Mt. Loretto.

Flicker: Reported by all observers as fairly common.

Downy Woodpecker: The species is holding its own wherever trees abound on the Island.

Kingbird: Seen by all observers over various parts of the Island.

Crested Flycatcher: A pair breeds every year near Cleaves' home. Ellison observed a pair nesting in a bird house near Forest Road.

Phoebe: Cleaves saw the nest of one pair under the concrete bridge over Lemon Creek and Weingartner reported two bridges in Clove Lake Park, each with a nesting pair of Phoebes.

Wood Pewee: Ellison and Weingartner report one pair at Forest Road and another at the Scout Camp in New Dorp.

Prairie Horned Lark: Cleaves and Redjives saw an adult and one immature not many days out of the nest at Oakwood Beach on May 30th. There may have been a second brood, as Cleaves saw an adult in the same locality acting as though she had possessions near by.

Rough-winged Swallow: Cleaves discovered two white eggs of this bird in a drainpipe in Lemon Creek Bridge.

Bank Swallow: About a dozen birds of this species were seen flying over pools near buildings on the recent "land-fill" area at Oakwood on May 30 by Weingartner.

Barn Swallows: Nests of these birds were seen on beams under the Great Kills Yacht Club buildings. Sailor's Snug Harbor's barns also contain a number of these nests.

Purple Martin: Observed by Cleaves and Redjives on Oakwood Beach on May 30, but there are no records of this species breeding on the Island recently.

Blue Jay: Breeds commonly in all parts of the Island.

Common Crow: There seem to be fewer individuals but Crows still seem to nest on the Island, though no nests have been found.

Fish Crow: Cleaves has heard Fish Crows over Pleasant Plains in late June and early July, but does not know whether they nest on the Island.

Black-capped Chickadee: Cleaves saw and heard these birds in Pleasant Plains and near Rockland Avenue, and Ellison and Weingartner report hearing and seeing them in Moravian Cemetery.

White-breasted Nuthatch: Cleaves heard this bird at Pleasant Plains, but it is not a common summer resident.

House Wren: Breeds commonly in many nesting boxes all over the Island, often rearing two broods.

Long-billed Marsh Wren: Nests have been found at Oakwood Heights and the birds have been seen and heard there as well as at South Avenue, Travis Avenue and Old Mill Road, Richmond.

Catbird: One of the most numerous summer residents on the Island.

Brown Thrasher: These are dependable summer residents and breeders in most parts of the Island.

Robin: At least two if not three broods are raised by these birds each year.

Wood Thrush: Reported by all observers to be common breeders in Staten Island woodlands.

Veery: Cleaves heard them singing in Mt. St. Michael property in June and about the same time Ellison and Weingartner heard a male singing and saw both male and female near Lambert's Lane and South Avenue.

Bluebird: A pair nested in a box on Spring Street, and more individuals were seen by Ellison, Redjives and Weingartner.

Starling: Common everywhere on the Island, raising a number of broods.

White-eyed Vireo: One heard by Cleaves in his yard in Pleasant Plains on May 30. Weingartner heard one in Spring Street valley and Ellison on Travis Avenue.

- Red-eyed Vireo: Common summer resident and breeder wherever suitable woodland occurs.
- Cedar Waxwing: A flock of these birds was seen by Weingartner and Ellison on June 6 in Willowbrook Park.
- Yellow Warbler: Heard by all observers in various parts of the Island, though no nests were found.
- Chestnut-sided Warbler: Heard by Ellison on Travis Avenue. No nest found.
- Prairie Warbler: Cleaves heard a single male singing where this bird has been breeding for a number of years. No nest found this year.
- Ovenbird: Heard singing by all observers in various parts of the Island.
- Yellowthroat: A regular breeder in various parts of the Island. A nest found in a low shrub near Kissel Avenue by Weingartner.
- Yellow-breasted Chat: Males heard singing near McGuire Ave. in Buck's Hollow and in Spring Street valley.
- Redstart: Reported by Casimir Redjives.
- English Sparrow: Very abundant all over the Island, particularly near habitations.
- Bobolink: On May 11 Cleaves heard and saw seven male Bobolinks in Mt. Loretto grounds. One week later he saw 2 females in the same area. On May 30th Cleaves and Redjives saw and heard 1 male in the same area. The species may have nested there although no nest was found.
- Meadowlark: The birds were seen and heard singing in Mt. Loretto and Mt. St. Michael fields as well as in fields in back of the Tavern on the Green, New Dorp.
- Red-winged Blackbird: Seen by all observers in abundance in many swamp areas.
- Orchard Oriole: A pair reported nesting in the neighborhood of Mr. Wilmott's home, 5910 Amboy Road, Prince's Bay.
- Baltimore Oriole: This bird is a widespread breeder all over the Island.
- Purple Grackle: Grackles prefer nesting in evergreens therefore are common where evergreens occur.
- Cowbird: Occurs regularly on S. I. at nesting time, depositing its eggs in the nests of other birds.
- Scarlet Tanager: Each observer reports several pairs, they nest in hardwood timber.
- Cardinal: Cardinals have increased on Staten Island as permanent residents in recent years.

Indigo Bunting: Found by Cleaves, Ellison and Weingartner in several sections of the Island.

Goldfinch: A male in full plumage was discovered in a dense thicket near Guion Avenue by Weingartner and Ellison. This bird acted as though it had young in the dense thicket.

Towhee: A common summer resident in many parts of the Island.

Grasshopper Sparrow: Weingartner and Ellison followed a pair across a grassy meadow near the Tavern on the Green, New Dorp. The male was found singing on June 6.

Seaside Sparrow: Redjives located a nest and five eggs while walking through a marsh at Oakwood Beach, May 30. Several other males were heard singing.

Sharp-tailed Sparrow: Reported by Redjives.

Chipping Sparrow: Very abundant in Moravian Cemetery, but very local.

Field Sparrow: Spotty distribution all over the Island.

Swamp Sparrow: Heard by all observers in marshland and along creeks.

Song Sparrow: One pair raised two broods in a matrimony vine at 17 Amelia Court. One of our commonest permanent residents.

Furnishing a Model Apartment

LOLA LANDRY GEROW

Some of us wore jeans! And a few managed to look glamorous despite work with palette and sandpaper, mostly done during the hot month of August.

The Staten Island Museum had been asked by the New York City Housing Authority to be responsible for the educational and recreational program at the three new housing projects undertaken on the Island at South Beach, Todt Hill and Dongan Hills,—the last being known as the General Berry Apartments. This assignment involved furnishing a model apartment in each project, to show tenants what can be done by substituting taste and skill for money. It was an opportunity for the Museum to display the kind of work that is done in some of its courses and the practical application which can be made of it; so the undertaking was accepted, and placed in the hands of Jean Leason, Curator of Art, and Mrs. Alice Reichenbach, the Museum's Public Relations Director. No money was available;—not a penny. A committee of painters and craftswomen was appointed, with Mrs. Doris Jones as chairman. The eleven volunteer decorators were Mrs. Ethel Easley, Mrs. Helen Friedman, Mrs. Lola Landry Gerow, Mrs. Margaret Giro, Mrs. Valeria Korniloff, Mrs. Elizabeth Nugent, Mrs. Sylvia Pederson, Mrs. Kathryn Renfield, Mrs. Alice Rietmeyer, Miss Sherell Weinstein and Mrs. Ester Dahl Tellefsen.

One hot day in August, together with Mrs. Roswell S. Coles, head of the Museum's educational work, we met at the South Beach Housing Project to look over the apartment. Its walls, we found, were to be a soft yellow-green. Therefore all our color effects had to be planned with this in mind. Also, there were pipes and radiators to be considered.

Busy days followed. Second hand shops and storage warehouses were visited and attics were explored for old furniture to be repainted and decorated. The designs were planned by Sylvia Pederson, Doris Jones, Alice Rietmeyer, Helen Friedman and Valeria Korniloff. The necessary paints etc. were given us by R. C. Van Name.

The "elbow brigade" scraped, papered and re-finished, and even antiqued some second-hand furniture for hall, dinette and bedrooms.

For tenants we had envisioned a couple with two growing boys, and we had to keep a budget in mind. The living-room, we felt, must have the lion's share. For that room Jaeger's furniture store generously allowed us to choose from their stock, and we selected well-proportioned pieces of suitable colors. Lieberman's let us have draperies and curtains; and "Jiffy-Join," a drapery-track and tape manufacturer, supplied other material.

Accessories are important in making a home charming and livable. We used lamps designed by Helen Friedman and Alice Rietmeyer; Margaret Giro's hand-made rugs; Sylvia Pederson's plaques, trays, wastebaskets and table accessories; Valeria Korniloff's Chinese tray; glasses and dishes painted by Doris Jones; and Ester Tellefsen's ash trays, candy dishes and figurines. Original paintings made the walls distinguished; these were loaned by Percy Leason, Ethel Easley, Ester Tellefsen, Cecil C. Bell, Fernand Fingado and Lola Gerow. Children from the two Museum art classes, Ava Heyman, John and Paul Gianfagna and Louis Trella, contributed cowboy and Indian paintings for the boys' room.

On September 12, the opening day, the committee, (no longer in jeans and smocks) served as hostesses. Members of the Woman's Auxiliary of the Museum, under the able chairmanship of Mrs. Anselm Nascher, have been acting as hostesses every day since then, and attendance has been steady and often very large.

The next project is to be Todt Hill, the apartment to be furnished by Jaeger, under the supervision of the committee. The General Berry Apartments are to be ready early next year, and the committee will handle the model apartment there in the same way as the South Beach project.

Modernizing Our Natural History Exhibits

ROBERT MATHEWSON

Following a recommendation by a special committee of which A. M. Anderson was chairman, the Board of Trustees on July 18 approved a plan for modernizing our natural history exhibits. Our Open House on October 9 gave our members and visitors an opportunity to view this new exhibition area, which though incomplete in some details, at least outlines broadly the treatment we shall give to the exhibition of natural history specimens.

Our Museum presents a somewhat special problem in exhibition. We are a local institution, confining our exhibits for the most part to Staten Island. Collecting yields no gold nuggets, grizzly bears, dinosaurs, nor any spectacular material which would lend itself easily to diorama treatment. In addition, we have to change exhibits frequently, since most of our visitors attend regularly, and need variety. Further, the Nature Section is very active—we are a “doing” rather than a “looking” Museum—and it needs considerable exhibition space constantly.

With a limited budget available we decided to concentrate on creating exhibition cases to provide a maximum flexibility with a minimum of effort. The result is really a new room devoted to Natural History. The centerpiece will be a large mural, now in preparation, showing a group of mastodons wandering about a site near the present location of Seaview Hospital.

The cases have reversible and removable backs to permit any type of interior arrangement. Two cases face the street and have been set in as show windows to be lighted at night.

Among exhibits shown at the Open House were a number in commemoration of some of the many important naturalists who have collected and studied here. These include some of our Founders, like Nathaniel Lord Britton, Charles W. Leng, Arthur Hollick and William T. Davis; and later men, of whom Alanson Skinner is a notable example.

Photography — Art, Science, Industry and Hobby

ALFONS WALLICH

The aim of the photographic exhibit at the Staten Island Museum is to show as nearly as possible everything that camera-minded people, from the youngest snap-shooter to the prize-winning expert, would like to see and to study. Photography is a many-sided subject. It is an art; it involves the sciences of chemistry and physics; it is an industry; and it is an essential and most accurate medium of recording other arts, sciences and industries. And it is also a fascinating hobby. It was a pleasure to be invited to sponsor an exhibition affording so many points of interest.

Displays furnished by manufacturers, and exhibits made by Wallich's Camera Shop have been set up with the cooperation of the Museum staff under the supervision of Robert Mathewson. These include—to mention only a few—a real, working, well-equipped dark-room, where enlarging and printing are demonstrated and visitors can bring their own negatives for free prints; a collection of cameras ranging from the "pin-hole" to the elaborate apparatus used for special purposes today; filters, lenses, diaphragms, shutters, flash-lights, a model of a complete photo-finishing plant, and many exquisite prints both in black and white and in color.

Among those who have contributed to make this an all-round presentation are: Sylvania Electric Company; Pako Corporation; Eastman Kodak Company; Ansco, Bausch and Lomb, Wollensak and many others.

While I heartily commend to the photo fan the helps offered in photographic books, instruction booklets, and by accommodating supply houses, I feel certain that the easiest and surest way to gain that knack for better pictures is to come in and let us hand it to you on a silver platter.

Annual Members' Exhibition

JEAN LEASON

The Annual Members' Art Exhibition was officially opened on Oct. 9, at the Museum's Open House. A preview for exhibiting artists was held on Saturday evening, the 8th. Fifty-eight artists are represented this year by 81 paintings, which cover a wide variety of subject-matter. Landscapes from various localities, gay still-life subjects and several fine portraits make this a colorful and interesting show.

Artists and their work are as follows:

Albert Barbelle, "Autumn Leaves," "Seascape;" Henrietta Beaumont, "Flower Study, September," "Bass River, Cape Cod;" Ely M. Behar, "The Buonincontri Children," "Palmer's Yard, Prince's Bay;" Agatha Bell, "Abandoned Farm;" Cecil Bell, "Group," "Junk Wagon;" Marcus Blom, "Garage, Vermont," "Woodshed, Vermont;" Harry Bourne, "Sentinel;" Janet Bruns, "Aphrodite," "Portrait;" F. A. Busing, "Splashing Good;" LeRoy A. Busing, "Haddon's Barn," "Hust Pond;" Alice Canady, "Annette;" Lawrence Cianchetta, "My Pal Butch;" Joseph Contessa, "Backyard Garden;" Alex Danin, "Mississippi Gulf Coast;" Artemis Darson, "Pansies;" Idelle Di Pietro, "Study in White;" Ethel R. Easley, "Late Summer Flowers;" Patricia Eckersley, "Skating Season," "These Little Things;" Emily Ericson, "This Again," "Purple Hearts;" Christian Everson, "Road-Hog;" Fernand O. Fingado, "Approaching Storm;" Maria W. Garrett, "Old Copper," "Summer Zinnias;" Lola Landry Gerow, "Our Doorway," "Pot-Pourri;" Lillian Williamson Gilfillan, "Lazy Acres;" Hans Glinicke, "Fallsburg," "Ash-Tray Things;" Mary T. Howe, "Roses;" Robert A. Hitch, "Carnations;" William Johnston, "Still Life;" Stanley Jorgensen, "441 Arthur Kill Road," "Flotsam and Jetsam;" John Koestner, "Landscape;" Valeria Korniloff, "From The Back Yard," "A Head of a Girl;" Isabel Leason, "Landscape;" Jean Leason, "Gladioli," "Summer Landscape;" Percy Leason, "Pat," "Bill;" Eleanor Marshall, "An Arrangement;" Ethel C. McDonnell, "Waquoit Bay," "Washburn's Point;" Alfred McNamara, "The Shadows."

Emily Neumann, "R. Mason Kirkland, Jr.;" Elizabeth Nugent, "Fort Wadsworth," "Portrait;" Joseph F. Nugent, "Westport Homestead," "Light Pacific;" James R. O'Brien, "Snowed in at Home;" Philip Politico, "Graham Beach;" Helen Mary Reddy, "Still Life;" Warren F. Robinson, "Vanguard;" Margaret Rue, "Tulips," "Windmill;" Edythe W. Scott, "Rev. John H. Warnshuis;" Louise H. Schmidt, "Prince's Bay from Semler's;" Elizabeth Leah Sherman, "Westport;" Violet Siemering, "Nantucket

**GRAHAM BEACH**

Oil Painting by Philip Politico

Lane;" Isabel Grinnel Simons, "The Candle Mold;" Setta Solakian, "Summer Flowers;" Eleanor Sutter, "Lilies of the Field;" Esther Dahl (Tellefsen), "Zinnias;" William P. Uhler, "Industry;" Julie Von Bevern, "Phlox;" Julia G. Wells, "The Bird Feeder;" Frederic Whitaker, "April," "Harlem Sunshine;" Thea Wilbur, "Plaid Table Cover," "Lemon Creek Inlet;" Paul Wilke, "Gardenias."

Literature Relating to Staten Island

"The Mystery of the Gulls," by Phyllis A. Whitney. Westminster Press, Philadelphia.

Miss Whitney, Staten Island's successful writer of stories for young people, is setting a production pace that is something to watch. Her prize-winning book "Willow Hill" appeared in the early part of 1947. In the same year she copyrighted "Writing Juvenile Fiction," a book on methods. In October, 1948, "Ever After," a teen-age story, was published; and now "The Mystery of the Gulls," for rather younger folk is on library shelves.

This latest story is a real who-dun-it, though it involves no violence or crime and the principal actors are children. Other children will follow the tale with breathless interest; and it must be admitted that at least one adult did not lay it down until the mystery had been solved. We understand that the next story is to come along at Miss Whitney's usual rate of speed, and it will be awaited with anticipation by her audience. Miss Whitney conducted a class for writers at the Staten Island Museum for two years.

M.A.

"Germs," a monthly magazine of popular Microbiology, has as its editor Dr. Natale Colosi, whose fight against pollution of this Island's waters is making scientific as well as local history. The Associate Editor is Edythe Kershaw, M.A., Instructor in Bacteriology at Wagner College, and Nino Colosi is business Manager. The magazine is published by the Institute of Microbiology Inc., of New York, and has as its object the dissemination of knowledge about the relationship of microbes to health and human welfare. Its efforts are not limited to Staten Island, but its information about water pollution, rabies, spraying D.D.T., poison ivy, poliomyelitis and many other subjects are highly applicable here. It is well printed and attractive in form, and many of its contributors are outstanding authorities on their specialties. It is gratifying to know that this important undertaking has its offices in this community.

"Smoke Signals." Another and even more recent magazine project with a definite connection with the Island is the bi-monthly published by The Indian Association of America Inc. The Editor is Dolores M. Becker, and Frank E. Becker, her husband, is a Contributing Editor. Both are well known here. The magazine, of which the third number has just appeared, contains Indian lore, news concerning Indian affairs and the Indian Association, and articles bearing on the subject. The current number contains an article by Roswell S. Coles, Director of the Staten Island Museum, on Staten Island Indians, and some literature concerning them.

"*This Week*," the Herald-Tribune's Sunday Magazine, for September 25, puts the proposed bridge across the Narrows on its cover under the title "Dream Bridge;" and the article, by Bernard Simon, tells the story of David Steinman, bridge engineer, who made a plan for the bridge twenty-five years ago and has been fighting ever since to have it adopted. Steinman wrote an article for our Bulletin in December, 1945, advocating the bridge. The Herald-Tribune's article reviews the history of the tunnel-bridge controversy, and describes some of the bridges which Steinman has built, from the great St. John's Bridge at Portland, Oregon, to the Thousand Islands Bridge over the St. Lawrence.

The Herald-Tribune again came to Staten Island for an article for *This Week*, when the model apartment furnished by the Museum in the new South Beach housing project was opened recently. A generously illustrated account by Ann Pringle, describe the work of the volunteer committee and the result of its efforts.

"*The Life of William T. Davis*," by Mabel Abbott, has been received from the publishers, Cornell University Press. Price \$3.50. Persons who can call at the Davis House, 146 Stuyvesant Place, or at the Museum, 75 Stuyvesant Place, will find a stock for sale; mail orders will be forwarded by us to the publishers and books sent by them direct to the purchasers. May we suggest (without hinting, of course!) that this would be a nice Christmas present to a friend?

Edna Leona Hoffmeyer

CARLITA L. NESSLINGER

In the Museum Bulletin for July 1949 the sudden death, on June 17, 1949, of Mrs. Anton W. Hoffmeyer was recorded with deep regret. For forty-one years she was actively engaged in the affairs of the S.I. Institute of Arts and Sciences and contributed in many ways to the development of the Institute as well as of the community of which she was an integral part.

Mrs. Hoffmeyer, néé Kraft, was a descendant of the Ingersoll family who came to this country before the Revolution. She was born in North Castle, Westchester County, N. Y., July 29, 1870, and attended Public School 50, New York City. Five years after being graduated from Normal College, New York, (now Hunter College) she married the late Anton W. Hoffmeyer who is remembered by early Institute members for his active leadership in Museum affairs.

In addition to her activities as a trustee since 1928, and as Second Vice President of the Institute since 1942, perhaps Mrs. Hoffmeyer's most active role was the enthusiastic service she rendered to the Museum through the Woman's Auxiliary of which she was a charter member and Vice President for several years. She was chairman of the annual Auxiliary luncheon for 19 years. The energy and ability with which Mrs. Hoffmeyer acted on the Institute hospitality committee, the Woman's Auxiliary, and the Bird Club for more than 25 years are measures of her devotion to the Institute. The Museum collections of art as well as historical material were enhanced by her contributions.

Mrs. Hoffmeyer was active in other community affairs. For many years she was a member of the Woman's Club of Staten Island, the Staten Island Historical Society and the Wagner College Guild. She took an active part in the founding of the Conference House Association for the preservation of the Billopp House.

As a tribute to her memory the Board of Trustees, at its meeting of July 18, 1949, unanimously passed the following resolution:

"Whereas The Board of Trustees and members of the Staten Island Institute of Arts and Sciences have suffered a grievous loss in the passing on June 17, 1949, of Edna Leona (Kraft) Hoffmeyer,

"And Whereas in the affairs of the Institute and its affiliates, Mrs. Hoffmeyer had taken a most active part,—preceded on the Board of Trustees by her late husband, she served as a member since 1928 and as Second Vice President from 1942, was an active member of the Woman's Auxiliary for over 25 years,—in the activities of many of the Institute's sections, and was an indefatigable worker where the welfare of the Institute was concerned,

"Be It Resolved by the Board of Trustees, at this meeting of July 18, 1949, that the heartfelt condolence of its members be conveyed to the bereaved family, and that this resolution be inscribed upon the minutes of this meeting."

Necrology

Mary Openshaw Murray (Mrs. Henry J. Murray), a member of the Institute of Arts and Sciences, and a lifelong resident of Staten Island, died July 9, 1949. She was also a member of the Woman's Auxiliary of the Institute. Mrs. Murray was the daughter of the late Edward and Susannah (Crabtree) Openshaw, and was born in New Brighton. She was active in church circles, and for many years was on the Board of Managers of the Port Richmond Day Nursery. She was also a member of the Auxiliary of the Seamen's Church Institute in New York, one of the founders of the Women's Literary Club of Port Richmond, and Treasurer of the Port Richmond Branch of the American Red Cross in World War I.

John Koestner, Curator of the Davis Entomological Collections at the Staten Island Museum, died September 5, at his home in Grasmere. He was born in Austria, came to the United States fifty years ago, and had lived on the Island for forty-six years. He was a graduate of the Imperial School of Arts and Crafts and the Imperial Academy of Art in Vienna, and had traveled extensively in Europe, Africa and Central America. In 1939 he started the Art course at Wagner College, and was head of the department until his retirement in 1948. Before coming to Wagner he was associated with private schools in Manhattan for many years. He taught at the Institute for Crippled and Disabled there, and placed many rehabilitated students in jobs. In 1940 he was appointed to the staff of the Staten Island Museum.

Mrs. I. Gluck, of 112 Stuyvesant Place, a member of the Institute of Arts and Sciences for the last two years, died June 25 at Asbury Park, New Jersey.

Accessions

Since our report in the July Proceedings, thirteen accessions of interest have been added to the Museum's collections. Among these are an unusual number of books. Dr. E. C. McCulloch presented fourteen books, on nature subjects; John Koestner gave us ten books on science and fourteen on fine arts and crafts; Miss Frances Hankinson presented a large number of scientific books and magazines, as well as a collection of herbarium specimens, from the library of her father, the late Dr. Frank Hankinson; Willis A. Boughton sent us a genealogy of the Bouton, Boughton and Farnam families; Charles Ericson presented a book by William Beebe; and a book on "Oil" was sent by the University of Oklahoma Press.

A valued accession to the George William Curtis Collection was received from Mr. E. Eisele,—a translation into German by the famous author Friedrich Spielhagen, of Curtis's early book "Nile Notes of a Howadji." This is dated 1857, and therefore apparently is Spielhagen's first published work, and it is of interest that he chose this particular book for the purpose. Mr. Manuel J. Johnson contributed a pamphlet recording the Centennial Celebration of Christ Church, New Brighton; and Elliott Burgher gave us a song entitled "My Girl in Tompkinsville," with words by James Barnes, for our growing collection of local music.

An important gift was that of Henry J. Murray—an incense burner brought from China by his brother in law, Henry J. Openshaw, formerly of New Brighton. The piece, beautifully wrought, consists of base, body and top. A similar piece without the base has been assigned to a dynasty of the 15th century.

Col. A. L. Parmelee, of Headquarters Fort Wadsworth, presented us with a small signal cannon.

Other accessions were old Christmas cards, valentines, greeting cards, photographs and letters from various sources.

Membership

We welcome the following who have become members between the publication of our last *Proceedings* and October 13: Mark W. Allen, Charles F. Ames, Arthur H. Anderson, Mrs. John E. Aspinwall, Mrs. Harold C. Baker, Miss Dorothy P. Barlow, Juan J. Behm, Mrs. Mortimer Bleiman, Miss Dorothy Bogert, Ilsley Boone, Mrs. Herbert L. Booth, Wesley W. Braisted, Mrs. H. B. Brownell, Dr. and Mrs. N. S. Calhoun, Mrs. Mary Carlsen, Mr. and Mrs. John J. Carroll, Mrs. Ernest A. Copeland Jr., Paul J. Driscoll, Mrs. Patricia M. Eckersley, Mrs. Emily Ericson, Mrs. J. Galasso, Mrs. A. J. Gillam, Miss Molly Gillam, Louis Ginnis, Mrs. Ann F. Grennie, George C. Hall, Mrs. John Herold, James L. Hoppes, Miss Helen Hotchkiss, Wilbur L. Huot, H. Sherman Ingalls, Mr. and Mrs. Harry Jaeger, Miss Edith A. Jones, Miss Sarah T. Joyner, William Kaelin, Mrs. Wm. A. Kennedy, John Kohout, Mrs. Michael Lacche, Anthony R. Litrell, Samuel Lynch, Mrs. Dollie S. MacGregor, Miss Mildred J. Mackie, Theodore A. Mason, Herbert McCreary, Mrs. Edward J. Meurer, Mrs. A. Herbert Mintz, Miss Madeline Oldfield, David Palma, Mrs. Birge Papazian, Mrs. Idelle Di Pietro, Miss Eugenia Pietz, Mrs. Edythe J. Reagan, William N. Reidy, Mrs. Maxwell Reiskind, Frederick H. Rheinheimer, Donald W. Robinson, Mrs. George Rodwin, Arthur L. Schwab, Mrs. Harriet G. Shelare, Jesse Siegel, Mrs. Belle Smith, George Stanning, Dr. Charles G. Stiles, Louis A. Stirn, Mrs. Louise Priest, Mrs. Max Tischler, Rev. Clark L. Van Auken, Mrs. Marinus Verkuil, Mrs. Charles Wacker, Mrs. C. Douglas Walsh, Thomas A. Watson, Miss Sherell Weinstein, Mrs. Julia G. Wells, Mrs. George H. Whitten, Mrs. Raymond F. Wright, Miss Renee Wuyts, William A. Niques, and Mrs. Louis A. Zerega Di Zerega.

Institute Notes

The Annual Open House was held October 9, with an attendance of more than 600 people. The visitors saw for the first time the new arrangement of the first floor to display the natural science and photographic exhibits (described elsewhere in these *Proceedings*.) The Annual Members' Art Exhibition, and exhibits by sections and affiliated societies, filled the Art Gallery and Exhibition Room on the second floor; and in the auditorium the motion picture "It's Your Museum," recently made by Frank E. Gunnell, showing various activities of the Museum, was run four times to capacity audiences.

Speakers were Borough President Cornelius A. Hall and Director Roswell S. Coles. Refreshments were served in the Davis House, an innovation which seemed to find favor with the large number of guests who adjourned there after going through the main building.

Future Events:

November 12. Annual Artists' Ball and Carnival at Boulevard Hotel, Grant City. 8:30 p.m. Square Dancing. Costumes optional. Admission \$1.40 including tax.

November 19. William T. Davis Memorial Lecture. McKee Vocational and Technical High School. Colored Motion Picture by Frank E. Gunnell—"The Lost World—River of No Return." 8:15 p.m.

The Woman's Auxiliary will serve lunch, followed by a Social Hour and Miscellaneous Sale, in the Art Gallery, immediately after its meeting on November 30, from 12:30 to 4:30 P. M.

December 17. Concert. Music Appropriate to Christmas. McKee Vocational and Technical High School. 8:15 p.m.

January 21, 1950. William T. Davis Memorial Lecture. McKee Vocational and Technical High School. Motion Picture and Lecture by Commander Irving Johnson: "Yankee's Wander World."

Art Exhibitions. The Section of Art has scheduled two one-man shows for December, with a joint opening on the 4th, as follows:

Betty Vosburgh will show photographs and water-colors in the Exhibition Room. Most of the pictures were made in New Guinea, whence Miss Vosburgh has recently returned. Albert Barbelle, Second Vice President of the Section of Art, will exhibit oil paintings in the Gallery, including marines, landscapes, still life and portraits. Mr. Barbelle is conducting the Museum's Commercial Art Course, and also leads the landscape sketching group.

Christmas Handcraft Sale. Beginning December 3 and continuing until Christmas, the teachers of craft courses will hold a sale of jewelry, ceramics, hand-painted china and many other objects of art and utility. The sale is being arranged and organized by Mrs. Alice Rietmeyer.

The Staten Island Oratorio Society, under the direction of Harry Russell, is making a series of radio broadcasts over Station WNYC. The first in the series will be the Song of Miriam, and will be heard early in November.

The Museum will be closed December 25 and 26 and January 1 and 2.

THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES

DIRECTORY, 1949-1950

The Staten Island Institute of Arts and Sciences is incorporated under the laws of the State of New York for the purpose of promoting an interest in the arts, sciences and history, particularly as they relate to Staten Island. It does this through a wide range of activities as listed below, and by maintaining a Museum at 75 Stuyvesant Place, and Office and Library in the Davis House at 146 Stuyvesant Place and the Britton Cottage at New Dorp. The City of New York contributes annually toward the cost of maintaining the Museum.

Membership in the Institute consists of two classifications: (1) Group membership: (a) Sections, formed by five or more members to carry out some particular branch of study; (b) Affiliated Societies; and (2) Individual Membership: Patron \$1,000, Life Member \$100.00, Annual Member \$3.00. Anyone interested in helping carry out the purposes of the Institute is invited to become a member.

Officers

President, Dr. James P. Chapin

2nd Vice-President, Joseph F. Burke

1st Vice-President, Dr. Frank A. Strauss

Treasurer, Robert M. Leng

Secretary and Director, Roswell S. Coles

THE WOMAN'S AUXILIARY

The Woman's Auxiliary was organized in 1909 to support the interests of the Institute in all its activities. Any woman interested in the object of the Auxiliary is eligible for membership. Meetings are held the last Wednesday in each month, October to May inclusive, in the Museum. The October meeting consists of a President's Reception in the afternoon, other meetings are at 10:30 A.M. They consist of a short business meeting followed by an interesting program. Annual dues are \$1.00 payable April 1.

President, Mrs. Frederick F. Richardson, 640 Bard Ave., S. I. 1

THE INSTITUTE COUNCIL

The Institute Council was formed in 1942 to coordinate group activities and plan Institute programs. Each Section and Affiliated Society is represented by two delegates and meetings are held twice a year.

President, W. N. Meyer, 42 Allendale Road, S. I. 5

SECTIONS

Section of Art

- Purpose:** To foster the progress of Art on Staten Island.
- Membership:** Membership is open to anyone expressing an interest in the objects of the Section. Working members are selected on the basis of their work.
- Activities:** Two annual exhibitions for which members may submit work, special exhibitions, the Annual Artists Carnival, Classes in Arts and Crafts.
- Fee:** Annual \$3 membership in the S. I. Institute of Arts and Sciences.

President: Percy A. Leason, 344 Van Duzer St., S. I. 4

Section of Literature — The Belles Lettres Society

- Purpose:** To foster appreciation of, and to encourage literature and other fine arts among its members, and in the community.
- Membership:** Active members shall be residents of Staten Island who have shown definite interest in literature and other Fine Arts.
- Meetings:** Monthly from September through June on third Sunday afternoons at member's homes. Members may bring guests.
- Fee:** Two dollars per annum.

President: Dr. Ida G. Everson, 215 Hart Blvd., S. I. 1

Section of Microscopy — S.I. Microscopical Society

- Purpose:** To hold an Annual Microscopical Exhibition in co-operation with the Staten Island Institute of Arts and Sciences and by means of monthly meetings provide opportunities for adult workers in the natural and physical sciences to get together and exchange experiences. The Society is conducting an intensive study of the serpentine rock of Staten Island and the relation of plant and life thereto.
- Membership:** Open to those who are members of the Institute and who use the microscope in their studies or occupation.
- Meetings:** First Wednesday evening of each month from October through May.
- Fee:** Annual \$3 membership in the S. I. Institute of Arts and Sciences.

President: Joseph F. Burke, 25 Curtis Place, S. I. 1

AFFILIATED SOCIETIES

The Fortnightly Club

Purpose: The object of the Club is intellectual culture and entertainment.

Membership: Names proposed by members are referred to the Executive Board for canvass of the Club before being voted upon. Members shall give an original paper every alternate year.

Meetings: Fortnightly, Mondays, except when special holidays intervene, at the homes of members.

Dues: Two dollars per year.

President: Mrs. Thomas Dobson, 758 Tompkins Ave., S. I. 5

The Philatelic Society

Purpose: To assist its members in acquiring knowledge in regard to philately, to cultivate a feeling of friendship among philatelists and enable them to associate with members of similar societies, and, in furtherance of these objects, to assist its members in acquiring and disposing of stamps of various kinds.

Membership: Any person of good character above the age of 21 years interested in philately may become a member of the Staten Island Philatelic Society. There shall also be eligible for Junior membership persons of good moral character interested in Philately below the age of 21 years.

Meetings: The second and fourth Monday evening of each month from September through June in the Museum.

Dues: Initiation Fee \$1.00; Dues \$2.00 per annum.

President: Thomas A. Watson, 52 Westervelt Ave., S. I. 1

Richmond County Chapter

N. Y. State Society of Professional Engineers

Purpose: To preserve the traditions and advance the ideals of the engineering profession, to uphold its dignity and enhance its honor, to raise the standards of preparation for its practice, and to extend its sphere of influence in and of service to society.

Membership: Only Licensed Professional Engineers and Land Surveyors of the State of New York may apply for membership.

Meetings: The first Wednesday of each month from September through June, at the Museum.

Dues: Annual dues are \$20.00 which includes membership in the National and State Societies of Professional Engineers and the local chapter. In the case of Land Surveyors annual dues are \$13.00 as they are not included in the National Society.

President: Frederick Mardus, 57 Radcliff Road, S. I. 5

Treble Choral Ensemble

Purpose: To promote the love of group singing through participation and the study of the best in choral literature for women's voices. To aid worthwhile community projects through proceeds of concerts.

Membership: Basic knowledge of the rudiments of music. Voices are chosen on the basis of quality and the ability to blend with other voices of the ensemble. Interest and love of good music is another requirement.

Meetings: Every Tuesday evening from September 21 through May in the Museum.

Dues: \$10.00 a year payable in two installments in September and January. Cost of music is included in this fee.

President: Mrs. Howard Shadwell, 1215 Todt Hill Rd., S. I. 4

Section of Music — Staten Island Oratorio Society

Purpose: To study and present Oratorios and other choral music and to promote good music on Staten Island.

Membership: Active and Associate.

Meetings: Weekly on Monday evenings at the Museum.

ACTIVE: \$10.00 per year, in four equal installments.

ASSOCIATE: \$5.00 per year, due in September, entitles member to two tickets for each concert.

President: Leslie Carter, 636 Howard Avenue, S. I. 1

Section of Natural History

Purpose: To encourage and promote an interest in Natural History, particularly in regard to Staten Island and the immediate vicinity. To promote organized outdoor and indoor meetings for the study and recording of Staten Island Natural History.

Membership: Membership is open to any member of the Institute expressing an interest in the field of the Section.

Activities: Field trips and outings, bird walks, nature study groups and special programs.

Dues: Annual \$3 membership in the S. I. Institute of Arts and Sciences.

President: Miss Mathilde Weingartner, 17 Amelia Court, S. I. 10

Section of Photography — S. I. Camera Club

Purpose: To further the knowledge and practices of pictorial photography; to foster exhibitions, lectures, demonstrations and courses in photography; to promote the interests of amateur photography; to encourage the values of other branches of amateur photography as a hobby; and to join with and/or associate with other clubs, organizations, societies and individuals fostering amateur photographic activities.

Membership: Open to anyone expressing an interest in the objects of the Club. Regular members, over 16 years; Junior Section members, anyone over 14 years attending public school.

Meetings: Every Wednesday evening 8:30 P.M. from September through June in the Museum as follows: 1st Wednesday, Business meeting; 2nd Wednesday, lecture; 3rd Wednesday, Color Slide motion picture competition; 4th Wednesday, Print competition. Junior Section meets every Wednesday afternoon 2:00 P.M.

Dues: Annual dues \$6.00 which includes membership in the S. I. Institute of Arts and Sciences. Junior Section membership annual dues \$1.00.

President: Michael Koledo, 57 Grant Place, S. I. 6



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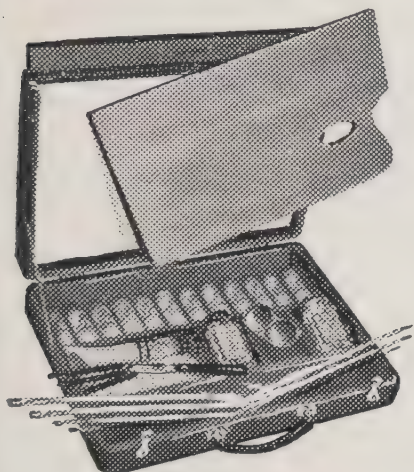
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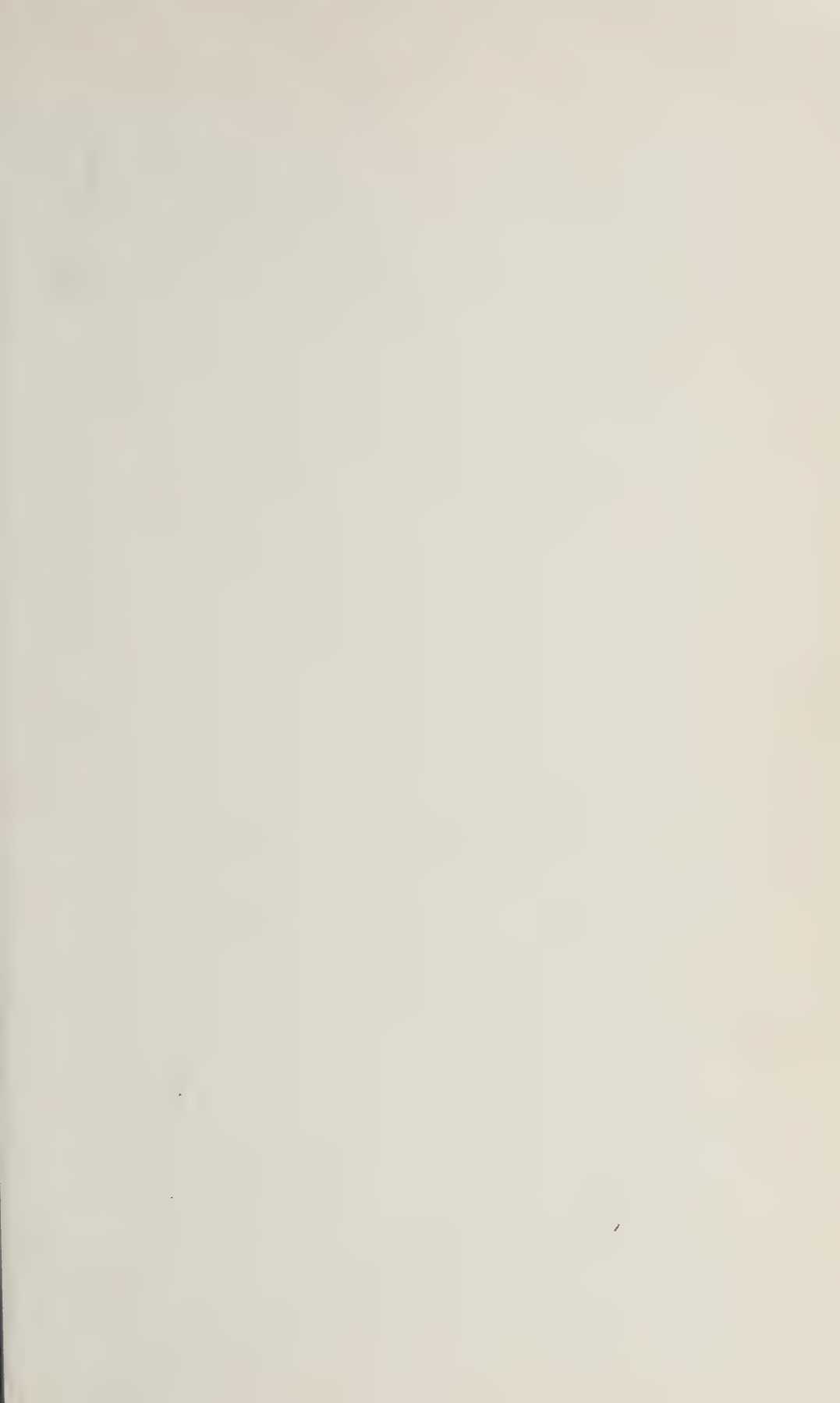
PROCEEDINGS of the
TATEN ISLAND INSTITUTE
of ARTS and SCIENCES



VOLUME XII

NUMBER 2

January, 1950



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PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES, Vol. 12, No. 2, January, 1950. Published Quarterly in October, January, April and July, by the Staten Island Institute of Arts and Sciences, 75 Stuyvesant Place, Staten Island, N. Y., and entered as second class matter at Staten Island, N. Y., under Act of August 24, 1912. Subscription price \$2.00 per year, included in annual membership fee of \$3.00. Mabel Abbott, Editor.



From a miniature

SAMUEL AKERLY, M.D.

Courtesy of the New York Institute for
the Education of the Blind.

Early Records of the Rocks and Minerals of Staten Island

ROSWELL S. COLES

Part II

In the October, 1949, *Proceedings* we traced the earliest scientific records of our rocks and minerals from the first volume of the *American Mineralogical Journal* in 1814 to the publication of Pierce's geological description in the *American Journal of Science* in 1818. Part II will carry our story from that point to the publication of the *Geological History of Manhattan* by Isaacher Cozzens in 1843.

The development of scientific knowledge about Staten Island during this period centers to a considerable extent on the work of Samuel Akerly, whose "Medical Topography" was noted in Part I of this paper. No biography of Akerly is known to exist and in lieu of such the following notes may be of interest. The information is derived from various historical and geological works consulted in preparation for this paper but I am particularly indebted to Mrs. John Cullen, who now resides in the Akerly house, and to the librarian of the New York Academy of Medicine for help. It is to be hoped that someone interested in Staten Island history will develop these notes into a more complete record of the life of one of our more famous citizens.

Samuel Akerly was born in New York in 1785, the son of Samuel Akerly, Sr., a wealthy shipbuilder. In 1799 his sister, Catherine, the widow of William Cock, married Samuel Latham Mitchill, so at the age of 14 Akerly came under the influence of this dynamic scientific leader from whom he derived his lifelong interests. Although specializing in medicine, Akerly wrote prolifically on a variety of botanical, zoological and geological subjects.

His scientific interests led him to become one of the original members and first corresponding secretary of the New York Lyceum of Natural History on its founding in 1817 and he also served as second vice president in 1819. This institution, in 1876, became the New York Academy of Sciences. From 1812 to 1824 he was an editor of the *Medical Repository*.

A graduate of Columbia College in 1804, he is listed in 1809 as physician to the New York Dispensary. During the War of 1812 he was a hospital surgeon in the U.S. Army and undoubtedly began his association with Staten Island at that time. Serving at

* Numbers in parentheses refer to Appendix III.

what is now Fort Wadsworth was Lt. Col. John Garretson, owner of the Woods of Arden House, and we may assume that Akerly's friendship with Garretson led to his interest in the house and to its purchase by him after Garretson's death in 1837. Akerly resided there until his death, July 6, 1845.

Akerly's notable life work was his compassionate effort to relieve the burdens of the deaf, dumb and blind. He labored indefatigably for 10 years as superintendent of the School for the Deaf and Dumb, which he had helped to organize and, in 1831, he engineered the incorporation of the New York Institution for the Education of the Blind, serving as president until 1842 and as a member of the Board of Managers until his death. It appears that a brief interest in politics as assistant alderman, 1816-1818, led to a useful knowledge of the art of "getting things done."

An interesting account of the Akerly farm, written by his son-in-law, appears in the *Westchester County Gazette* of July 22, 1887.

Returning now to rocks and minerals, four articles by Akerly are listed in the *Geologic Literature on North America* (U. S. Geological Survey Bulletin 746). The last, an *Essay on the Geology of the Hindson River*, was a small volume dedicated to Samuel L. Mitchell as a "testimonial of respect by his friend and former pupil, Samuel Akerly."^{(1)*} This early geology contains an interesting pictorial longitudinal section of the lower Hindson from the Highlands to the Neversink Highlands of New Jersey, including Staten Island. However, little new information comes to us from this volume, much of it being taken from his own and Pierce's earlier records. The one interesting feature concerns the "wood coal" mentioned earlier by Mitchell.

"Wood coal, in connexion with iron pyrites, has been found in this island, and has led the uninformed to search in expectation of coal for fuel, while, in fact, the specimens which I have seen are none other than carbonated wood, changed by sulphuric acid on the decomposition of pyrites or sulphuret of iron. . . ."

Akerly had previously discussed local coal in a paper "on the Improbability of finding coal on Long Island or in the vicinity of New York."⁽²⁾ The *Essay* also contains a section on Bergen Point and one on Hoboken. The latter mentions the serpentine of Staten Island.

By 1822 Staten Island geology had become known beyond the confines of our own district. The father of American Mineralogy, Parker Cleaveland, professor of mathematics and natural philosophy at Bowdoin College, 1813-1878, published in 1822 the first general work on American mineralogy, an *Elementary Treatise on Mineralogy and Geology*. The first edition, issued prior to the publication of our earlier Staten Island records, contains no reference to our minerals, but in 1822 the enlarged second edition has a good deal to say about the Island.⁽³⁾

Cleaveland assumes that what we now call serpentine on Staten Island is steatite and mentions this and talc, but not serpentine, as coming from here. Of the steatite he states:

"On Staten Island where it is abundant, and forms a large proportion of the elevated grounds on the eastern part of the island; it is soft, adhesive to the tongue, and yellowish gray, or greenish yellow; when connected with talc it is greenish and more compact. It contains all the varieties of talc, most of the varieties of asbestos and some chromate of iron."

Chemical analyses of talc, serpentine and steatite are given and he has this to say of the distinctive features of steatite:

"When steatite is passing into indurated talc, it is almost impossible to draw a line of distinction; but in most cases the characters already given will be sufficient. It is sometimes nearly allied to serpentine, and in this case its unctuousity is scarcely perceptible, and it differs chiefly by an inferior degree of hardness. When friable, like chlorite, it still differs from that mineral by its dullness, greater unctuousity and in fusibility."

Cleaveland's *Geology* was followed by a "*Catalogue of American Minerals*" by Dr. Samuel Robinson.⁽⁴⁾ The Staten Island list has grown to 23 minerals including various forms of quartz, prehnite, "hematitic brown oxide of iron," "granular argillaceous oxide of iron," "hepatic sulphuret of iron" and shot ore.

Samuel L. Mitchill contributed two notes during the period under discussion. ⁽⁵⁾ Paleozoic fossils, "Anomites, pectinites, nadreporites, and spirulites in wacke" are noted in a *Catalogue of the Organic Remains*, and are included among other items among which are serpentine (but not from Staten Island) and "the fatty matter into which a woman was converted after lying in the grave thirty-three years."

Mitchill also delivered a *Lecture on Some Parts of the Natural History of New Jersey* before the Newark Mechanics Association for Mutual Improvement in the Arts and Sciences. He speaks dramatically of the fact that the Hoboken serpentine had been found to be rather a "hill of native magnesia," and "There is a continuation of it at the northern extremity of Staten Island, but it is not so pure. This latter is reported to have furnished chromate of iron." The "native copper" from Staten Island is also mentioned.

In the Report of T. A. Conrad in *Documents of the Assembly of the State of New York*, ⁽⁶⁾ 61st. Session, 1838, we find reference to the outcrop of Granite:

"This rock occurs in place on Staten Island, on the shore opposite Nautilus Hall, at the Quarantine. It is coarse grained, composed of white and smoky quartz and gray feldspar, and mica. It is seen only over a space of a few square rods, and is covered by the deposits belonging to the erratic block group. It is not of a suitable texture for a building material, and cannot be applied to any useful purpose, except as rough wall stone."

The serpentine is also included on this page with information previously noted in other publications. Conrad says that "some of

the talcy varieties of serpentine are called soapstone by the people," and that "talc, carbonate of magnesia and hydrate of magnesia, abound in it, and the rock might be used with profit in making magnesian salts." The list of minerals (p. 151) appears to be taken verbatim from Robinson.

The "chalybeate spring" mentioned in Part I of this article is noted by Conrad in a folded insert, "Catalogue of the Mineral Springs in the State of New York, hitherto known, with their composition as far as determined." Under Richmond there occurs only the notation, "chalybeate spring."

Akerly's most famous work, as far as Staten Island is concerned, is his "Agriculture of Richmond County."⁽⁷⁾ The section on geology, while presenting material the sources of which are now familiar to us, may be quoted in part.

"The basis of Staten Island is a primitive magnesian rock, of green serpentine, similar to the rocky peninsular of Hoboken in New Jersey. Some of it is hard and compact, and capable of taking a polish while other portions of it are soft and pass into talc and soapstone. Veins of amianthus are found in it, and beautiful long fibrous asbestos. Carbonate of magnesia, in a pulverized (powdery) form, has been collected from narrow rifts and veins of the rock and a white incrustation found both here and at Hoboken, was long since ascertained by Dr. Bruce of New York, to be hydrate of magnesia. Crystals of chromate of iron, are also diffused through the rock but not in sufficient quantities to be employed in the manufacture of chromic yellow, (chromate of lead.)

"On the hills near the quarantine establishment, (at the time in Tompkinsville) a great variety of magnesium minerals may be obtained. The serpentine rock is laid bare on the side hill near the south road of the Quarantine, and at its base, in the road near the Black Horse Tavern; (New Dorp) also in the low ground south of Richmond village, on the road by the Fresh Kills. Thus the whole of the hilly part of the country appears to be underlaid with magnesian rocks."

Akerly then adds an interesting observation,

"But the writer in all his walks and excursions, has not seen a single specimen of serpentine, either on or under the surface, except at places where the base rock crops out. The soil of the island is therefore not a magnesian soil, but one derived from other sources than the base rock."

This is true, at least in part. The mantle of soil spread over our hills is the result of glacial and post glacial action. However, there are many localities where serpentine boulders are found and where soil is largely derived from the disintegration of this relatively soft rock. As a part of the general study of the serpentines Mr. Lee A. Ellison has been working on the magnesian quality of our soils and will report subsequently on his findings.

Akerly continues his description with a statement which is at least half true.

"From all appearances, the rocky formation of Richmond County is coeval in part with the formation of the serpentine rock of

Hoboken, and in part with the greenstone or trap rocks on the Hudson River, and the red sandstone which underlays them."

The concluding note is also of interest.

"The storms of autumn and winter throw upon the southern shores of the island a black sand which may at times be gathered in large quantities. This is not an earthy but a metallic sand, as on examination it appears to be fine particles of iron ore, and may be separated from the quartz sand with which it is mixed, by a magnet."

In our *Proceedings*, Vol. 6, p. 45 (1931) a study of magnetic sand gathered from the Wolfe's Pond area by Mr. Davis and others, following a storm on March 4-5, 1931, was reported by Mr. Burke. Mr. Ellison is at present studying the heavy residual sands from serpentine decomposition with the thought that a connection between these and the magnetic seashore sands may be found.

In the same year that Akerly's *Agriculture of Richmond County* appeared, the *Mineralogy of New York*, by Lewis C. Beck was issued. ⁽⁸⁾ This is one of the large volumes of the *Natural History of New York*. There are many references to Staten Island but of these we can mention only the serpentine.

"Serpentine passing into steatite, and containing veins and masses of magnesite, asbestos, amianthus, talc, hydrate and carbonate of magnesia, is found at the quarantine. Indeed it constitutes the main ridge of hills on the island, which extends from New Brighton to a little west of the village of Richmond, a distance of about eight miles. According to Mr. Mather, this ridge ranges from N. 20 degrees E. and S. 20 degrees W. and the prolongation of the line of direction strikes the serpentine hills of Hoboken in New Jersey. Throughout its whole extent, this rock exhibits the diversified characters which are observed at the Quarantine, or New Brighton. This grouping of minerals, as in other cases, renders it quite difficult to distinguish the several varieties from each other. There are many intermediate or transition states of these serpentines, which in hand specimens, might be considered as distinct; but an attentive examination of the locality will unfold their true characters, and save the chemist much labor and anxiety."

Finally, we should note the *Geological History* by Isaacher Cozzens. ⁽⁹⁾ "Plate 4" is a pictorial section of Staten Island from east to west, showing the telegraph at Fort Wadsworth, "Toad" Hill and the "Kills." The figures include granite, serpentine, sandstone, trap or greenstone, beds of pea iron ore and diluvium. Much of this has been discussed by earlier writers but with the following additions: The granite is called "graphic granite." Marmolite, originally described by Nuttall and now considered a variety of serpentine, is named from the Island for the first time ⁽¹⁰⁾ and Cozzens thinks that the white, silvery talc takes the place of the hydrate of magnesia of Hoboken.. He states that sandstone "is supposed not to have been found in place yet" and he mentions the trap rock as being quarried and erroneously called "Staten

Island Granite" (from which Graniteville derived its name). The iron ore is referred to the sandstone, rather than the serpentine. At Stapleton, "boulders of the 'Catskill Mountain Limestone' were exposed containing *Delthyris* and other fossils."

Included in the *Geology* is a list of minerals from the Island.

The discussion of Cozzens's *Geology* concludes this early study of our rocks and minerals. In the two parts of this paper we have been able to see the beginnings of the study of Staten Island geology and to note in detail the information available and the problems which confronted a later generation of students, Britton, Hollick and others. It is hoped that these early records will serve as a helpful background to give perspective to the study of the writings of the founders of our institution.

Appendix III

(1)*An Essay on the Geology of the Hudson River and the Adjacent Regions*, by Samuel Akerly, New York, A. T. Goodrich & Co., 1820.

(2)*American Journal of Science*, Vol. I, 1814, p. 191-198.

(3)*An Elementary Treatise on Mineralogy and Geology*, by Parker Cleaveland, second edition, Boston, 1822, pp. 437-440.

(4)*A Catalogue of American Minerals with their Localities*: "including all which are known to exist in the United States and British Provinces, and having the towns, counties, and districts in each state and province arranged alphabetically. With an appendix, containing additional localities and a tabular view. By Samuel Robinson, M.D., Member of the American Geological Society." Boston: Cummings, Hilliard, & Co., 1825.

(5)*Catalogue of the Organic Remains* which with other geological and some mineral articles were presented to the New York Lyceum of Natural History in August, 1826, by their associate Samuel L. Mitchill. Printed at the request of the Society by J. Seymour, John St., N. Y., 1826.

A Lecture on Some Parts of the Natural History of New Jersey delivered before the Newark Mechanic Association for Mutual Improvement on the Arts and Sciences on Tuesday, June 3, 1828, by Samuel L. Mitchill, M.D., an honorary member, N. Y. Elliott & Palmer, 1828, p. 20.

(6)*Documents of the Assembly of the State of New York*, 61st Session, 1838, vol. IV, No. 200, p. 139.

(7)"The Agriculture of Richmond County," by Samuel Akerly, M.D., Oakland Farm, Southfield. In Vol. 2, of the *Transactions of the New York State Agricultural Society*, 1842, p. 211.

(8)*Natural History of New York, Part III, Mineralogy* "Comprising detailed descriptions of minerals hitherto found in the state of New York, and notices of their uses in the arts and agriculture. By Lewis C. Beck, M.D., Professor of Chemistry and Natural History in Rutgers College, New Jersey. Albany: Printed by W. & A. White & J. Visscher. 1842, p. 277.

(9)*Geological History of Manhattan or New York Island*, by Isaacher Cozzens, W. E. Dean, N. Y., 1843, p. 55.

(10)See the *American Journal of Science*, Vol. IV, 1821, p. 16, and the *Journal of the Academy of Natural Sciences of Philadelphia*, Vol. III, 1823, p. 129.

An Old Manuscript: Locke's Address to Kossuth

MABEL ABBOTT

Ellis Island doubtless has been the "gateway to America" for more persons than any other spot; but for a time, early in the last century, Staten Island was the gateway through which many celebrities from abroad entered this country. Lafayette was entertained here in 1824 before his reception at the Battery; we received Garibaldi in 1850; and in December, 1851, the Hungarian patriot Louis Kossuth touched American soil for the first time on Staten Island, amid ceremonies second in size but not in enthusiasm to those which met him in New York. The visits of these heroes are recorded in histories, but the fact that they landed at Staten Island is often overlooked. A reminder of Kossuth's arrival is the recent discovery that the manuscript of the address of welcome delivered by Richard Adams Locke is still in existence, in the possession of Locke's grand-daughter, Mrs. F. Winthrop White, of 3 Gordon Place, West Brighton.

Kossuth, as we all know, was an exile from Hungary because of his revolutionary activities there. His visit had some possible political implications which had been discussed in Congress and made much of by some newspapers, so the popular interest had mounted even above that normally attending the arrival of an important foreign figure. It was decided to land him on Staten Island and entertain him at the home of Dr. A. Sidney Doane at the Quarantine station before bringing him to the city for his official welcome.

A local committee was formed, and three public meetings were held at "the Military Hall," Vanderbilt's Landing. Minthorne Tompkins, (son of Vice President Daniel D. Tompkins, a resident of the Island) was appointed Grand Marshal, with the following aides: Robert C. Wetmore, D. B. Allen, W. H. Allen, J. B. Hyde, W. H. Vanderbilt, D. A. Comstock, Dr. Ephraim Clark, W. Harlow, O. E. Lee, George A. Osgood, M. M. Davidson, George Catlin and M. B. Butler. On the reception committee were Dr. Westervelt, a son-in-law of Governor Tompkins, Dr. Clark and Samuel French—perhaps others whose names have not been found. Richard Adams Locke was asked to deliver the address, a task of importance, since it would be the first public expression of American feeling toward this significant and controversial figure in European affairs.

Locke was extremely well known. He was a relative, though not as has sometimes been said, a direct descendant, of the

philosopher John Locke. He was born in 1800 at East Brent, Somersetshire, England, and came to the United States in 1827. Being an extremely versatile writer, he immediately found employment on the New York papers. His "Moon Hoax," the famous series of articles published in the New York Sun beginning August 21, 1835, purporting to relate extraordinary discoveries on the moon, catapulted him into international prominence. In an era of hoaxes, which then were considered perfectly ethical newspaper practice, this was the greatest and most sensational hoax ever perpetrated, and it has never been forgotten.

Locke lived on the Island for a number of years and in various localities. At one time he lived on the South Shore; at another in a house, now gone, next to the house of the Governor of Sailors' Snug Harbor, (Governor Thomas Melville, brother of Herman Melville); and at still another, inside what is now the Lighthouse property, which then was part of the Quarantine grounds. Whether he was living there at the date of Kossuth's arrival is not known. He was for a time U.S. Boarding Officer here.

The gentlemen of the local committee made great preparations. Watch was kept for the Humboldt on which Kossuth was to arrive. Arrangements were made to send messengers to every town on the Island as soon as the vessel was sighted; signal flags were to be hoisted at three different places; and a tent to accommodate about 3,000 persons was put up.

Dr. Doane's part in the proceedings began December 3, when a number of Hungarian exiles who had recently arrived in New York came to the Island to take part in preparations. Doane offered them "Democratic-Republican accommodations," — presumably meaning the best he could scrape up for such a crowd. Most of them considerably declined, but they appointed eight of their number to wait on the Island until Kossuth's arrival. These Dr. Doane put up somehow in a nearby house, and they took supper with him that evening. Next day more Hungarian exiles arrived, and they all took breakfast with Dr. Doane.

The Humboldt did not arrive until half past one o'clock on the morning of December 6. The messengers rode off to the various towns and the signal flags were hoisted; but these measures were hardly necessary, for "the forts and the various batteries fired a salute of thirty-one guns, one for each State," and the Humboldt replied with a suitable salute. "Their echoes awakened the Island and brought thousands of people to the shore," according to next day's papers. Dr. Doane, of course was still up, and busy. He and several of the waiting Hungarians and a delegation of committeemen from New York went off in the boarding boat and greeted Kossuth on the deck of the Humboldt. A short speech or two of welcome and thanks, and the guests landed.

"As they approached the shore the cheering was tremendous," the papers noted. A file of soldiers under command of Major Hagadorn escorted the party to Dr. Doane's house, and a squad remained on guard at the house all night.

A great crowd had gathered at Quarantine before breakfast next morning. Kossuth and his party ate breakfast with Dr. Doane, and then the Hungarian leader stepped out on the piazza, to be greeted with great and continued cheering. His first words were: "No - no - no hats off! It is cold!" So it was; a Staten Island December morning, and the crowd laughed. He spoke briefly and appreciatively and went back into the house.

About one o'clock Kossuth and Locke stepped into a carriage in front of the Quarantine buildings, preceded by the Tompkins Guards in their blue, gold-laced uniforms, which won praise even from the city papers. Half a mile of civic and military societies, citizens on horseback, citizens in carriages and citizens on foot, and the Dodsworth Brass Concert Band which had been summoned from the city, moved off and passed along Tompkins Avenue (now St. Mark's Place) to Richmond Terrace, past the Pavilion Hotel to Hamilton Avenue, on Hamilton to Tompkins Avenue, up to Fort Street, on Fort to Montgomery Avenue, down Montgomery to Richmond Road, and on Richmond Road to the tent, whose location was variously described as "in a large field on Richmond Road," "on the knoll in front of Dr. Vanderbilt's house on Richmond Road," and "on a hill about half a mile from Quarantine." One or two later accounts assert that "the reception was at Nautilus Hall in Tompkinsville," and that "the procession escorted the distinguished visitors to the old Presbyterian church in Tompkinsville." However, the contemporary newspaper reports were evidently by eye-witnesses, and they agree that the ceremonies took place in the tent. "The procession," said the New York Post condescendingly "was a very imposing affair, considering that it took place on Staten Island."

The Herald described the situation at the tent graphically: "Long before the head of the procession arrived, the marquee was filled with human beings — men, women and children. * * * When the military, constituting the head of the column, arrived, they found it necessary to displace the multitude by force, and at length it was necessary to apply the point of the bayonet to accomplish that object — an operation which caused much merriment and laughter. The scene beggars description. Such a muss was never seen — shouting, jesting and crushing to such a degree that some of the women were in great danger of being seriously hurt."

Seen on the platform, Kossuth looked pale and worn. He and his whole party had been seasick during the entire voyage and he

was not yet himself. He wore a velvet cloak and yellow kid gloves. On the platform were numerous persons of importance. An obituary printed November 20, 1885, at the death of Dr. Ephraim Clark, declared that General Garibaldi was present and made a "pleasing address." This is of interest if it is true, since Garibaldi himself had arrived as a refugee a year and a half before. He had chosen to live very quietly on Staten Island with his friend Antonio Meucci, but he was a figure of importance. But the Clark obituary was written long after the event, while not one contemporary New York paper mentioned Garibaldi's presence.

After a few short speeches, Locke, handsome, bearded and self-possessed, read his carefully prepared address. It was fervently enthusiastic, and expressed in the flowery phrases of the day. The New York Post said flatly that it was too long to print. Both the Tribune and the Herald did print it — a column and half of print so fine that the eyes ache even to look at it.

"Governor Kossuth of Hungary," Locke began, "we welcome you to this Western World. On this the first of its shores which receive your footsteps, accept the cordial gratulations of a rural population proud of the enviable distinction of being the first assemblage of the American people to assure you of their reverence, admiration and regard. Upon the Island County of Richmond, in the Bay of New York, has also devolved by the natural delegation of its position, the high honor of greeting you with a fervent expression of these sentiments, in behalf and in anticipation of the Country and continent at large; and we proffer them for your acceptance under the profound conviction that the Eastern hemisphere now contains no man to whom the Western is so impatient to express them and deems them so justly due. * * *

This was the style of the period, and Locke did it to perfection, down to the final flourish:

"Go on then, Great Kossuth; his [Washington's] worthiest successor upon this earth, and fulfil your mission. Stand forth like the Angel of the Apocalypse, with one foot upon the land and the other upon the sea, and swear ye the Western continent to the Eastern, that tyranny shall be no longer."

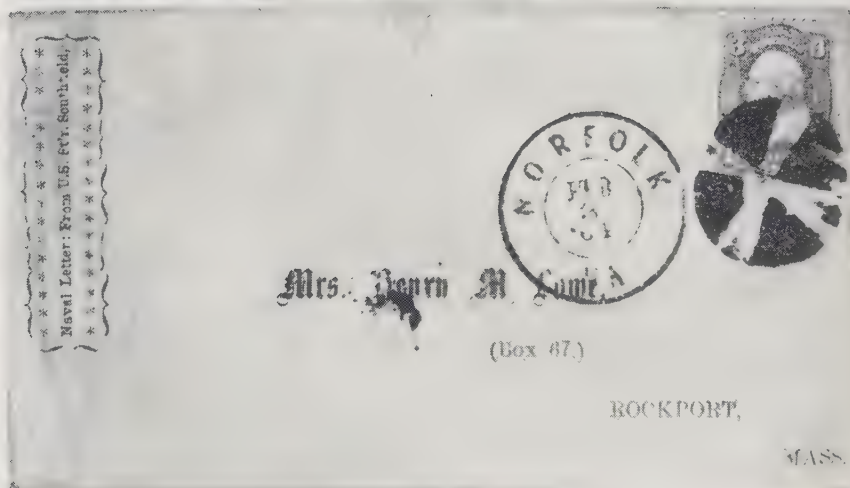
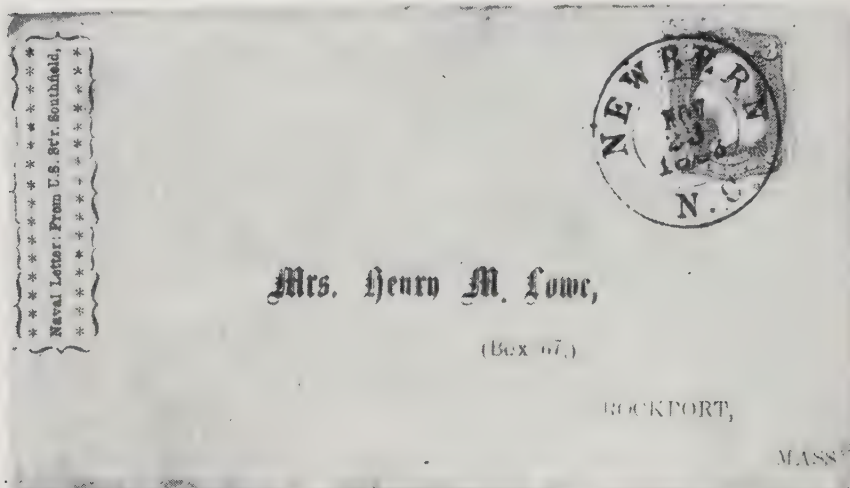
Kossuth's address in reply was formal, grateful, and not very long. Then the procession formed again and went through New Brighton and so back to the Quarantine grounds. By six o'clock he and his party were at Dr. Doane's dinner table. The dinner lasted about two hours, and then he went to his rooms and set to work with his secretaries. "During the evening," said the Post, "Dr. Doane's parlors were crowded with the elite of Staten Island." About nine o'clock Kossuth came down and greeted the people,

and then retired to his rooms again. Next day (undoubtedly after another breakfast with Dr. Doane) the steamer C. Vanderbilt took him and his party to the city.

His welcome there and his stay in the United States are matters of general history. We have been concerned only in resurrecting from yellowed newspapers the story of his reception here, and in recording the fact that the manuscript of Locke's almost forgotten address is still on the Island. It is written in a neat hand, the ink not badly faded. Locke's daughter Adele married J. V. L. Rianhardt of Staten Island, and their daughter, Emma L. Rianhardt, (Mrs. F. Winthrop White) inherited it with other papers, among which are a few priceless fragments of the Moon Hoax manuscript.

This account may well close with the comment of the New York Herald after the excitement was over:

"The whole affair passed off with great eclat, and 'the state of Staten Island' has nobly distinguished herself and has realized the saying of the Bible that 'the last shall be first.'"



Envelopes mailed by the second engineer of the old Staten Island ferry-boat Southfield, while it was in use as a United States gunboat during the Civil War.

Ferryboats that Went to War

ELLIOTT R. BURGHER

Before the coming of the white man, the Indians who lived on Staten Island ferried to the mainland in log canoes. After the white settlers came, many of our noted colonial families were in the ferry business from time to time, using first row boats and barges and then sailboats. On November 29, 1817, Daniel D. Tompkins started the first steamboat ferry service between the east shore of Staten Island and the foot of Whitehall Street, New York. As time passed, new ferry boats were built which were much larger and faster. Nevertheless, a ferryboat, no matter how elegant and up to date, is only a ferryboat, indispensable but totally undramatic. Then along came the Civil War, and some of our ferries were suddenly snatched out of their jog-trot routine to become actors in the tremendous drama of the eighteen-sixties.

At the start of the war, the Government was urgently in need of vessels which could be converted either into gun-boats, troop or supply carriers. Converted ferry boats were found remarkably useful for coast and river service despite their uncouth appearance. They combined light draft with handiness in narrow places, being able to steam and steer equally well in either direction, while their broad, overhanging decks furnished excellent gun platforms on which heavy batteries could be mounted.

The first two ferryboats taken by the Government for this purpose were the Clifton and the Westfield, both old acquaintances of traveling Staten Islanders. (This Westfield must not be confused with a later Westfield which exploded in her slip at Whitehall Street, New York, on July 30, 1871, with great loss of life.) The December 4, 1861, issue of the Richmond County Gazette tells us that the ferry boats Clifton and Westfield, heretofore running on the Railroad Line, had been sold to the Government to be used for War purposes. The approximate cost of building these two boats was about \$90,000. Commodore Vanderbilt sold them to the Government for \$180,000. This shows the Government's urgent need. The prices paid for them gave certain individuals or corporations a handsome profit.

In November 1861, President Lincoln considered a plan for the capture of New Orleans, submitted by Gustavus Vasa Fox, Assistant Secretary of the Navy. It was proposed to have the Naval vessels run past Fort Jackson and Fort Philip and take possession of the City; the forts being cut off from their base of supplies, would thus be compelled to surrender. Of all the officers at the disposal of the United States, Captain David Glasgow Farragut seemed the best fitted for this command and was formally

appointed commander of the expedition and also of the Western Gulf Blockading Squadron.

On the 16th of April, 1862, Farragut steamed up to a point about three miles below Fort Jackson with a fleet of twenty-four vessels and twenty schooners. Among these boats was Commodore Porter's motor flotilla which included the Westfield and the Clifton. At ten o'clock on the morning of April 18th, the vessels took positions less than two miles from Fort Jackson and opened a bombardment which was kept up all day. During the night, the enemy sent down an immense flat boat, laden with burning pine knots piled twenty feet high. The flames leaped a hundred feet in the air. In reporting the engagement Admiral Farragut said, "This is something entirely new." As the huge mass of fire came down the river toward the thirty-five wooden ships of the national fleet anchored close together in the narrow channel, it presented a fearful spectacle. The vessels that stood in the course of the fireboat quickly slipped their cables and ran inshore, allowing it to pass harmlessly by; but immediate preparations were made to meet other similar attacks. The old ferryboat Westfield, fitted with hose, was detailed as a fire patrol with several other vessels. From that time on a number of boats and rafts were sent down but so perfect were the arrangements for receiving them, no damage was done to any of the ships by fire.

The silencing of the forts was not successful. Farragut's proposition of running past the forts did not meet with the unanimous approval of the Union officers. However, it was decided to do so. About two o'clock in the morning of April 24th, the vessels in single line were to pass the forts in three divisions. What was left of Farragut's fleet which passed the forts, anchored off New Orleans on the afternoon of April 25th. New Orleans was surrendered on the 29th; Forts Jackson and Phillips having surrendered the day before. The loss to the Confederate flotilla could not be accurately determined, but it must have been equal to that of the Nationalists. Seeing that New Orleans was securely in the hands of the Army, Farragut ordered his vessels up the river. Baton Rouge and Natchez surrendered without opposition.

At three o'clock on the morning of June 28th, Farragut got under way with the intention of bombarding and running past the batteries at Vicksburg, as he had done with astonishing success at New Orleans. Among the vessels used to shell the batteries which lined the river for three miles around Vicksburg were the Westfield and the Clifton. The Clifton received a shot in her boiler and eight men were killed by escaping steam. This engagement was very successful although Vicksburg was not captured.

After conversion these boats were attached to the motor flotilla of Commodore Porter. On January 1, 1863, the Confederate ships attacked the Union squadron off Galveston, Texas. Among the

Union vessels were our old friends the Westfield, — now the flagship — and the Clifton. During the engagement the Westfield ran aground at the entrance to the bay and the Clifton went to her assistance. Finding that he could not get the Westfield afloat, Commander Renshaw blew her up, and in doing so he, with Lieutenant Charles W. Zimmerman, Acting Second Assistant Engineer, William R. Green, and about thirteen of the crew were killed. The remainder of the crew arrived in New Orleans on transports. The Westfield would have been a fine prize for the rebels had she fallen into their hands, as she was armed with six guns and was a fast sailer.

When Lieutenant Commander Law of the Clifton found he could not help the Westfield he withdrew with the other Union boats, thus raising the Union blockade off Galveston.

The Confederates recovered the large main shaft of the Westfield from the wreck and manufactured from it a 60-pounder rifled gun. This in due time found its way to the Annapolis Naval Academy and has rested in the grass of the gun-park there for many years.

The Clifton remained in active service in the Western Gulf Squadron. On the 4th of May, 1863, the Union gunboats including the Clifton attacked Fort De Russy, the fort was captured, and shortly afterward Alexandria was occupied by the National forces. On September 8, 1863, in the naval engagement of Sabine Pass, the Clifton ran aground. Before she was abandoned, her captain sent a nine-inch shell crashing through her machinery, unfitting her for further service when captured.

In the December 18, 1861, issue of the Richmond County Gazette is a news item telling of the sale of the Southfield and the Hunchback, two more Staten Island ferryboats purchased by the Government. Both of these were attached to the Burnside Expedition. They were armed with heavy guns and were expected to be very serviceable to carry troops, and also for the power of their machinery.

Twelve thousand soldiers commanded by Brigadier General Ambrose E. Burnside, and a naval force under orders of Flag Officer Louis M. Goldsborough, with Commander Stephen Clegg Rowan as Divisional Commander, were detailed for an expedition against Albemarle Sound and Roanoke Island. The naval part of the expedition consisted of an assortment of ferry, river and tug-boats armed with guns. Among this group were the Southfield and the Hunchback. The motley marine force assembled at Annapolis, and from there proceeded to Fort Monroe, and sailed from Hampton Roads on the night of January 11, 1862. By the 13th, most of the vessels had arrived off Hatteras Inlet.

The following letter was written home by a soldier of the 24th Regiment Volunteers who was on one of these ships. His reference

to being between decks, without windows, indicates that he was on one of the ferryboats, since that was the way they were constructed.

“Hatteras Inlet
Friday, January 31, 1862.

“Here I am at my regular business of writing army truths and a small amount of nonsense [sic] with which to amuse as well as to instruct all who may read or hear. This day until 4 P.M. was a fine clear day. At that time it came up cloudy, and at 7 P.M. began to rain and rained all night, very mild and warm however. We have spent the day reading letters and papers and cleaning guns and eating our usual portion of salt horse and Maryland shingles with stuff called coffee to wash it down. But we are crowded so here it is impossible to have things any better, so we put up with it very well hoping that we will get a footing on shore somewhere soon so we can get some fresh provisions and good air, for the air is very stifled here between decks. There are no windows, we have to burn lights all the time.

“Saturday, Feb. 1st. It has rained most all day but very warm. We have been taking on board tents and other camp equipage which makes us think we are going to sail soon. We don't care where we go if we can only get out of this devilish [sic] hole. There has been a grand show of Ambrotypes here today and the prize for the best one, two on one plate, was taken by your humble servant for Frank and Joey. The single ones were taken by Mr. Bonney of Dedham for his sisters Susie and Bessie. I did not dare to show yours for fear of there being too much competition for young widows. The prize I got was one quart extra of hot coffee and three newspapers. The prize for widows and spinsters was a written letter of introduction to the said widows and spinsters. God help the gal that gets the fellow who drew the second prize.

O. S. C.”

On the morning of February 4, all the ships were brought over the bar and early in the morning of February 5 the gunboats formed in three columns. Captain Goldsborough shifted his flag to the Southfield, taking with him Staff Officers, Commander Case, Captain's Clerk Fisher as signal officer, and Lieutenants T. R. Robeson and N. S. Barstow.

The ships anchored two miles above Stumpy Point. At nine o'clock in the morning on February 7, the vessels drew near Roanoke Island. At 10:30 A.M., the enemy gunboats and forts opened fire. A shot hit the Hunchback, wrecking the cross head and one of the slides of the engine. The Confederate boats were driven off and the fire was returned against Forts Bartow, Forrest and Blanchard. Troops were landed, the forts captured, and the Confederates were driven from Roanoke Island.

The next step was to capture the city of New Bern, North Carolina. General Burnside decided to land his troops at Slocum Creek, ten miles below New Bern. On March 12 the naval expedition left Hatteras Inlet. Among the vessels were the Southfield and the Hunchback. Troops were landed on the 13th, and on the 14th they opened a bombardment on Fort Thompson, which was captured. This left the road open to New Bern. Next, Fort Dixie and Fort Ellis were bombarded and captured, and then the city fell to Union troops.

On the 3rd of October, 1862, a detachment of troops under Major General John A. Dix and a naval force under Lieutenant Flusser, advanced against Franklin. When about two miles from that town the steamers Commodore Perry, which was the flagship, Whitehead and Hunchback under command of Edmund R. Colhoun, while endeavoring to round a bend in the river, were fired on by riflemen in ambush. The stream at this point was so narrow that even these little steamers could not turn around and they could not elevate their guns sufficiently to reach the high banks. Nothing remained but to push ahead, which they did, only to find themselves cut off from further progress by barricades across the river. In the meantime the enemy greatly increased in number and the fire of musketry made it extremely hazardous for any man to expose himself on deck or at an open port; and at the same time the Confederates began to fell trees across the stream below the ensnared gunboats so as to cut off their retreat. The National troops failed to cooperate, and having no support from the Army, the Navy was forced to fight a large force of the enemy with only three gunboats. The situation seemed nearly hopeless, but after much difficulty the steamers managed to turn their heads downstream and slowly pushed their way through the fallen timbers and escaped. In this affair four men were killed and eleven wounded.

Realizing the importance of Pamlico and Albemarle Sounds, the Confederates made several gallant efforts to recapture Roanoke Island, which was the key to all the defenses of Norfolk and ten of the most important rivers of North Carolina. On March 14, 1863, they made a sudden attack on Fort Anderson which the Nationalists had built on the River Neuse opposite New Bern, and bombarded the place for several hours, but with the assistance of the gunboats Hunchback and Hetzel this attack was repelled.

Later, after several more attempts, the Confederates realized that they needed an ironclad of the Merrimac type and early in 1863 they began work on the Albemarle at Edward's Ferry some miles up the Roanoke River.

The Confederate troops under General Hoke on April 17 and 18, 1864, made a desperate attack on Plymouth. The naval gunboats

Miami and Southfield gave assistance in repelling this advance. The Albemarle was about completed and was expected down the river at any time. At midnight on April 19, the Albemarle appeared. Lieutenant Flusser had already connected the Miami and the Southfield with long spars and chains intending to hold the ironclad between the two vessels. Captain Cooke of the Albemarle avoided this trap by hugging the shore, and when abreast of them, put on full speed across the river, intending to ram the Miami. She missed her, but struck the Southfield. Her iron beak struck the starboard bow and entered the fire room, and the chain plates on the forward deck of the Albemarle became entangled with the Southfield's hull. As the Southfield settled and gradually sank, she carried down the bow of the ironclad, so that the water poured through the forward open ports, and both vessels would have sunk had not the Southfield, on touching bottom, rolled over, thus releasing the Albemarle.

Acting Volunteer Lieutenant C. A. French was in command of the Southfield, and John Lowe was second engineer. When the vessel sank six officers and thirty men climbed over the stern to the Miami. Other survivors were picked up by the Ceres and Whitehead. Some swam ashore and were captured; some escaped by hiding in the swamps near shore.

The Confederates tried to raise the Southfield before the end of the war, but were unsuccessful.

The Richmond County Gazette of April 1, 1863, stated that a second ferryboat by the name of Clifton, plying on the eastern shore of the Island, had been sold to the Government for \$70,000. By May 13 it, too, was completely converted into a gunboat and was waiting for its officers to be appointed. It was to be put into commission in a few days.

It is interesting to note that at the naval battle of Galveston Bay the Westfield was the flagship of the Union fleet; and that when the Burnside Expedition captured Roanoke Island, the Southfield was the flagship of the Union vessels.

Compared with the more important naval operations in the war, the service of the North Carolina squadron appears to be of minor importance, but owing to peculiar difficulties under which the officers and men labored, it called for great endurance and gallantry; and our old ferryboats played their parts bravely and deserve to be remembered.

Bibliography:

Records of Staten Island Ferries in possession of the Staten Island Institute of Arts and Sciences.

Newspaper files in possession of the Staten Island Historical Society.

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Steam History of the Navy — Bennett.

History of the Navy — Edgar S. Maclay.

Buck's Hollow Survey

List of plants, etc, recorded during the year 1948

I. C. G. COOPER

(Note: This check-list of plants, trees, shrubs, insects, etc., is an extension of the survey of Buck's Hollow published by Mr. Cooper in the April Proceedings, Vol. XI, No. 3.)

Ferns

I-6-11*	<i>Botrychium virginianum</i>	Rattlesnake Fern
I-7-1	<i>Osmunda regalis</i>	Royal Fern
I-7-2	<i>Osmunda cinnamomea</i>	Cinnamon Fern
I-8-3	<i>Osmondia Claytoniana</i>	Interrupted Fern
I-11-1	<i>Onoclea sensibilis</i>	Sensitive Fern
I-14-1	<i>Dennstaedtia punctilobula</i>	Hay-scented Fern
I-16-2	<i>Polystichum acrostichoides</i>	Christmas Fern
I-18-1	<i>Dryopteris noveboracensis</i>	New York Fern
I-18-2	<i>Dryopteris Thelypteris</i>	Marsh-fern
I-27-4	<i>Asplenium platyneuron</i>	Ebony Splenwort
I-30-2	<i>Athyrium Filix-foemina</i>	Lady-fern
I-31-2	<i>Adiantum pedatum</i>	Maiden-hair Fern
I-32-1	<i>Pteridium aquilinum</i>	Brake

Flowering Plants

I-39-1	<i>Equisetum arvense</i>	Field Horsetail
I-68-1	<i>Typha latifolia</i>	Broad-leaved Cat-tail
I-445-1	<i>Spathyema foetida</i>	Skunk Cabbage
I-496-1	<i>Hemerocallis fulva</i>	Day-Lily
I-499-7	<i>Allium vineale</i>	Wild Garlic
I-504-6	<i>Lilium superbum</i>	Turk's-cap Lily
I-506-1	<i>Erythronium americanum</i>	Trout-lily
I-515-1	<i>Vagnera Racemosa</i>	False Spikenard
I-517-1	<i>Unifolium canadense</i>	Canada Mayflower
I-519-3	<i>Uzularia sessilifolia</i>	Sessile-leaved Bellwort
I-523-1	<i>Medeola virginiana</i>	Indian Cucumber-root
I-527-1	<i>Smilax herbacea</i>	Carrion-Flower
I-528-5	<i>Smilax rotundifolia</i>	Catbrier
I-534-1	<i>Hypoxis hirsuta</i>	Yellow Star-grass
I-	<i>Iris sp.</i>	
I-	<i>Sisyrinchium sp.</i>	
I-653-1	<i>Rumex Acetosella</i>	Sour-grass
I-657-12	<i>Rumex crispus</i>	Curled Dock
I-658-16	<i>Rumex obtusifolius</i>	Broad-leaved Dock
I-669-11	<i>Persicaria hydropiperoides</i>	Water Pepper
II-37-1	<i>Claytonia virginica</i>	Spring Beauty
II-47-1	<i>Cerastium viscosum</i>	Mouse-ear Chickweed
II-90-2	<i>Actaeg alba</i>	White Baneberry
II-113-25	<i>Ranunculus repens</i>	Creeping Buttercup
II-120-6	<i>Thalictrum dasycarpum</i>	Tall Meadow Rue
II-140-1	<i>Sanguinaria canadensis</i>	Bloodroot
II-177-1	<i>Barbarea Barbarea</i>	Yellow Rocket
II-184-3	<i>Cardamine pennsylvanica</i>	Pennsylvania Bitter-cress
II-193-1	<i>Brassica nigra</i>	Black Mustard
II-224-1	<i>Tiarella cordifolia</i>	False Mitrewort

*Volume, page, item numbers refer to Illustrated Flora, Britton & Brown, 1913 ed.

II-245-3	<i>Spiraea tomentosa</i>	Steeple-bush
II-251-4	<i>Potentilla canadensis</i>	Common cinquefoil
II-	<i>Fragaria sp.</i>	
II-345-2	<i>Baptisia tinctoria</i>	Wild Indigo
II-407-12	<i>Lespedeza hirta</i>	Hairy Bush-clover
II-411-9	<i>Vicia sativa</i>	Common Vetch
II-427-2	<i>Geranium maculatum</i>	Wild Crane's-bill
II-	<i>Xanthoxalis sp.</i>	
II-440-1	<i>Impatiens biflora</i>	Spotted Touch-me-not
II-	<i>Callitriche sp.</i>	
II-484-2	<i>Toxicodendron radicans</i>	Poison Ivy
II-493-1	<i>Celastrus scandens</i>	Climbing Bittersweet
II-	<i>Vitis sp.</i>	
II-511-1	<i>Parthenocissus quinquefolia</i>	Virginia Creeper
II-533-13	<i>Hypericum punctatum</i>	Spotted St. Johns-wort
II-	<i>Viola sp.</i>	
II-556-28	<i>Viola blanda</i>	Sweet White Violet
II-592-4	<i>Epilobium palustre</i>	Swamp Willow-herb
II-611-1	<i>Circaea Lutetiana</i>	Enchanter's Nightshade
II-	<i>Myriophyllum sp.</i>	
II-627-1	<i>Washingtonia Claytoni</i>	Hairy Sweet-Cicely
II-711-3	<i>Lysimachia quadrifolia</i>	Whorled Loosestrife
III-	<i>Asclepias sp.</i>	
III-47-5	<i>Convolvulus arvensis</i>	Small Bindweed
III-114-1	<i>Glecoma hederacea</i>	Ground Ivy
III-173-1	<i>Verbascum Thapsus</i>	Great Mullein
III-221-5	<i>Pedicularis canadensis</i>	Wood Bentony
III-255-1	<i>Mitchella repens</i>	Partridge-berry
III-	<i>Galium sp.</i>	
III-298-2	<i>Specularia perfoliata</i>	Venus' Looking-glass
III-321-11	<i>Lactuca spicata</i>	Tall Blue Lettuce
III-333-15	<i>Hieracium pratense</i>	Field Hawkweed
III-334-16	<i>Hieracium aurantiacum</i>	Tawny Hawkweed
III-335-3	<i>Nabalus serpentarius</i>	Gall-of-the-earth
III-	<i>Eupatorium sp.</i>	Joe-Pye Weed
III-360-13	<i>Eupatorium verbenaeefolium</i>	Vervain Thoroughwort
III-	<i>Solidago sps.</i>	
III-409-3	<i>Aster divaricatus</i>	White Wood Aster
III-515-2	<i>Achillea Millefolium</i>	Milfoil
III-518-1	<i>Chrysanthemum Leucanthemum</i>	Ox-eye Daisy
III-531-1	<i>Tussilago Farfara</i>	Coltsfoot

Trees and Shrubs

I-582-7	<i>Hicoria alba</i>	Mocker-nut
I-583-11	<i>Hicoria glabra</i>	Pig-nut Hickory
I-585-3	<i>Myrica carolinensis</i>	Bayberry
I-589-7	<i>Populus grandidentata</i>	Large-toothed Aspen
I-	<i>Salix sp.</i>	Willow
I-579-1	<i>Juglans nigra</i>	Black Walnut
I-606-1	<i>Caprinus caroliniana</i>	American Hornbeam
I-608-1	<i>Betula populifolia</i>	American White Birch
I-609-5	<i>Betula lenta</i>	Sweet Birch
I-613-4	<i>Alnus Alnus</i>	European Alder
I-615-1	<i>Fagus grandifolia</i>	American Beech
I-615-1	<i>Castanea dentata</i>	American Chestnut
I-617-1	<i>Quercus rubra</i>	Red Oak
I-617-2	<i>Quercus palustris</i>	Pin-Oak
I-622-16	<i>Quercus alba</i>	White Oak
I-623-20	<i>Quercus bicolor</i>	Swamp White Oak

I-629-1	<i>Celtis occidentalis</i>	Hackberry
II-134-1	<i>Sassafras Sassafras</i>	Sassafras
II-135-1	<i>Benzoin aestivale</i>	Spice-bush
II-235-1	<i>Liquidambar Styraciflua</i>	Sweet Gum
II-280-14	(note) <i>Rubus laciniatus</i>	Cut-leaved Blackberry
II-	<i>Rubus phoeniculusus</i>	
II-	<i>Rosa sp.</i>	Wild Rose
II-291-2	<i>Aronia atropurpurea</i>	Purple-fruited Choke-berry
II-329-3	<i>Padus virginiana</i>	Wild Black Cherry
II-365-1	<i>Amorpha fruticosa</i>	False Indigo
II-446-1	<i>Ailanthus glandulosa</i>	Tree of Heaven
II-481-1	<i>Rhus copallina</i>	Dwarf Sumac
II-481-2	<i>Rhus hirta</i>	Staghorn Sumac
II-482-3	<i>Rhus glabra</i>	Smooth Sumac
II-483-1	<i>Toxicodendron Vernix</i>	Poison Sumac
II-495-2	<i>Acer rubrum</i>	Red Maple
II-661-2	<i>Cornus Amomum</i>	Silky Cornel
II-664-1	<i>Cynoxylon floridum</i>	Flowering Dogwood
II-665-1	<i>Nyssa sylvatica</i>	Sour Gum
II-667-1	<i>Clethra alnifolia</i>	Sweet Pepperbush
II-678-1	<i>Azalea nudiflora</i>	Pinkster-flower
II-691-1	<i>Xolosma liqustrina</i>	Privet Andromeda
II-700-6	<i>Vaccinium corymbosum</i>	High Bush Blueberry
II-702-10	<i>Vaccinium vacillans</i>	Low Blueberry
II-720-1	<i>Diospyros Virginiana</i>	Persimmon
III-255-1	<i>Cephalanthus occidentalis</i>	Button-ball Bush
III-268-1	<i>Sambucus Canadensis</i>	Common Elder
III-270-4	<i>Viburnum acerifolium</i>	Maple-leaved Arrow-wood
III-271-6	<i>Viburnum dentatum</i>	Arrow-wood
III-273-13	<i>Viburnum prunifolium</i>	Black Haw

Hepatics

<i>Plectocolea crenulata</i>	)	
<i>Pellia epiphylla</i> (very common)	)	
<i>Pallavicinia Lyelli</i>	)	Positively identified
<i>Odontoschiziana prostratum</i>	)	
<i>Lophozia silvicola</i>	)	Small and undeveloped
<i>Cephalozia bicuspidata</i>	)	Positive identification
<i>Lophocolea minor</i>	)	difficult

Lichen

Cladonia subcariosa
Crocynia zonata

Insects identified

<i>Gerris marginatus</i>	Water strider
<i>Tenodera sinensis</i>	Praying mantis
<i>Malacosoma americana</i>	Tent caterpillar
<i>Lebia grandis</i>	Ground beetle
<i>Vanessa atalanta</i>	Red Admiral Butterfly

Diatom.

Odontium elongatum, var.
Tenua.

Forty-first Annual Christmas Bird Census

MATHILDE P. WEINGARTNER

On the morning of December 26th, ten observers set out at early dawn to count the birds that were spending the winter or part of it on Staten Island. These observers were: Carlton Beil, Roger Christiansen, Howard Cleaves, Herbert Curl, Lee A. Ellison, Henry Flamm, Kurt Henning, Charles Pearson, Casimir Redjives, and Mathilde P. Weingartner.

The weather was very mild. The temperature was 45° to 55°, the sky overcast, and a drizzling rain fell for about half an hour about 9 AM. The wind was southerly and mild.

The total species recorded was forty-five, with 14689 individuals. This was a somewhat disappointing result, but the mild weather so far this winter, the open season and the decrease of natural woodland areas, may have accounted for the smaller number of birds.

Several large flocks of Redwinged Blackbirds were seen. Some of them had been observed feeding on the seedpods of Sweetgum Trees. Seventeen Mourning Doves made up a larger total than had been recorded on any previous winter census. Five Hairy Woodpeckers were seen in the Tottenville area, being easily distinguished from the Downy Woodpecker nearby, by their larger size. Ten Killdeer were feeding near the little pond in Silver Lake Golf Course.

The Species seen and their number are as follows: Horned Grebe 13; Great Blue Heron 1; Black Duck 456; Canvas-back Duck 1; Greater Scaup 3325; American Goldeneye 31; Bufflehead 24; Old Squaw 17; White-winged Scoter 12; American Merganser 2; Red-tailed Hawk 1; Red-shouldered Hawk 3; Marsh Hawk 13; Sparrow Hawk 10; Pheasant 9; Killdeer 19; Great black-backed Gull 10; Herring Gull 7800; Ring-billed Gull 2; Laughing Gull 4; Bonaparte's Gull 600; Mourning Dove 17; Arctic Snowy Owl 2; Short-eared Owl 2; Kingfisher 1; Hairy Woodpecker 5; Downy Woodpecker 12; Horned Lark 7; Blue Jay 49; American Crow 72; Chickadee 74; White-breasted Nuthatch 7; Robin 13; Starling 1290; Myrtle Warbler 5; English Sparrow 238; Redwing 198; Cardinal 25; Goldfinch 29; Junco 107; Tree Sparrow 97; Field Sparrow 1; White-crowned Sparrow 5 (Curl); White-throated Sparrow 87; Song-Sparrow 93.

The Arctic Snowy Owls are a part of a fairly large number which have invaded the Northeastern States this winter. One was found dead on the beach but no sign of a bullet could be discovered on dissection. The bird may have been poisoned or died of internal parasites. These owls are very beneficial, eating quantities of rats and mice.

Literature Relating to Staten Island

"The Life of William T. Davis," by Mabel Abbott. Cornell University Press, Ithaca, N. Y.

Five years have passed since a "small, bright-eyed, gentle, ill-clad genius" presided among the stacks of insect boxes and other miscellaneous matter in the attic of the Staten Island Museum, but William T. Davis is, and will be for many years to come, an active force in the life of Staten Island. A founder of the Institute, he became a respected authority far beyond island confines.

A happier choice as his biographer could scarcely be found than Mabel Abbott, curator of the Institute's library. Miss Abbott has had both the painstaking patience to read through the many



"Well, here it is!" Director Roswell S. Coles and Writer Mabel Abbott exchange congratulations on the completion of *"The Life of William T. Davis."*

volumes and records in print and in longhand which Davis left, and the literary skill to present Staten Island's great naturalist in a true-to-life picture, completely recognizable to those who knew and loved him; a treat for those whose misfortune it is never to have met him.

While the book is of undisputed importance in the world of natural history, the reader needs no knowledge of the subject to find Miss Abbott's "Life of William T. Davis" a delight to read. The account is more than a record of one man's intensive investigation of the immediate world about him; it is a warm, human story of a great and gentle soul — a story that is somehow quieting to read in disquieting times.

The complexities of human beings fretted Davis, while nature's simplicities soothed him. Once he expressed this feeling to a woman who had brought herself to the brink of nervous prostration. "You ought to interest yourself in Nature, — in *things* and not people," he advised. In turning these pages, the reader wanders the wooded hills and sandy shores of Staten Island, observing with Davis's eyes those small "things" in nature which so interested and excited and soothed him. One comes to know the tolerance, the humor, the integrity of the man, and somehow perspectives are righted, as must always have been the case after a ramble with "Willie" Davis.

For those of us who reside in Staten Island, the book is also an absorbing record of some eighty years of changing history within our island boundaries.

PHYLLIS A. WHITNEY

December - January Exhibitions

JEAN LEASON

Two exhibitions are currently on view on the second floor of the Staten Island Museum.

The work of Albert Barbelle, which will remain in the gallery throughout January, is proving extremely popular. Among the forty-six paintings represented, each visitor can find at least one that satisfies his taste. His subject matter is always pleasing, and his use of the palette knife and heavy paint often creates an unusually strong effect, especially in his seascapes.

Mr. Barbelle was born in Boston. After graduating from Cooper Union he studied in Paris. For over forty years he has conducted his own commercial art studio in New York. He has held one-man shows at the Ward Eggleston galleries as well as other New York galleries. He is second vice president of the Section of Art of the Staten Island Institute of Arts and Sciences, and for the last two years has been conducting a course in Commercial Art at the Museum.

The paintings he is showing in his present exhibition are: Mountain Waters; Flowers; Prayer; Sea Shells; Incoming Tide; Paula; Rosita; Sophisto Rhythm; Breakers; Sandy's Boat; Landscape; Birch Trees; Early Snow; Waiting; Christmas Morning Mass; Bird Dance; St. Patrick's Church, Richmond; Fall; Low Tide, Great Kills; Autumn Leaves; Great Kills Yacht Club; Arthur Kill; The Sketch, South Beach; Meditation; Snowbound; Hawaiian Dancer; Moonlight on the Hudson; Sunday Afternoon; Across the Palisades; Roaring Surf; Hunters; Cameron Pond; The Struggle; South Beach Creek; Lemon Creek; High Tide at Sandy's; Up for Repairs; Windy Day, Radio City; Incoming Tide (a second of the same name); Still Life; Autumn Time; Uncle Jos; Rocky Shore; Mongolian Shrine.

The other exhibition is that of Miss Betty Vosburgh, which includes a surprising range of subject and medium. This exhibition will close January 12. Water colors, lithographs, photographs, color transparencies, ceramics, and bas reliefs in wood and bronze attest Miss Vosburgh's versatility. A native Staten Islander, she received her Master's degree in Fine Arts from Columbia University and also studied at the New York School of Fine and Applied Art in Paris. Shortly after graduating from college, Miss Vosburgh made a pilgrimage to the Holy Land. She traveled from Marseilles through Egypt and then to Jerusalem, arriving there for Holy Week Ceremonies. It was during this trip that she

collected the material for the religious subjects shown in this exhibition. The objects shown are:

Oil Paintings: Panel depicting Staten Island scenes, treated as a decorative design; Across the Nile, Luxor.

Water Colors: Ponte Trinita and Ponte Vecchia, Florence, Italy; Perugia, Italy, Oncoming Fog; Stra, Italy, on the Grounds of the Summer Royal Palace; Paris, Place de Regina; Early Morning, Constantinople Harbor; Rocks near Sardinia; My Kittens; Play Pavilion; New Guinea Dancer; The Tree by the P.X., New Guinea; New Guinea Shampoo; Humboldt Bay; Nile River Boats, Luxor, Egypt; Country Scene, East of Manila; Nipa Houses and Outrigger Boat.

Lithographs: Temple of Luxor; Rue de Rivoli, Night; a Taste of Art.

Sketches: Southwest Pacific Area, Member of Woman's Army Corps; Portrait Sketch, Pfc. Dorothy Sieber; Sketches on board an Army Transport; New Guinea, one sketch in water color and one in pen and ink.

Sculpture: Second Station of the Cross, bas relief in French Walnut, loaned by the Religious of the Convent of the Sacred Heart of New York City; Flight into Egypt, bas relief in Mexican Mahogany; "Mulier Ecce Filius Tuum" (Woman Behold Thy Son).

Ceramics: French Concierge Returning from Market; Candle stick; Seashore Fantasy; Dish with underglaze decoration; Dish.

Membership

We welcome the following who have become members between the publication of our last Proceedings and December 8:

Mrs. Agnes Baller, Arthur Blanc, Frederic L. Brenner, Leland E. Chisholm, Andrew G. Clauson, Frederic Conger, Mrs. Irma Csak, Miss Etta Connolly, James W. Dutremaine, Carl F. Ettlinger, Mrs. Fred Fendel, Mrs. H. Garig, John Gianfagna, Mrs. James Gilfillan, Bernard L. Gluck, Dr. Bernard Greenspan, Miss Gertrude H. Heaphy, Frank S. Jacobsen, Mrs. Stewart H. Johnson, Melvin Keene, G. Gilbert Klein, Mrs. Margaret C. Kraemer, Mrs. F. T. Metcalfe, Bruce Moore, Miss Therese Murphy, Adolph Ostwald, Jay Pellicone, Mrs. Louise I. Pelouze, Mrs. E. C. Philip, Mrs. A. W. Roberts, Mrs. Sally S. Ronk, Mrs. H. Dean Smith, Mrs. J. V. Soldivera, Miss F. Dorothy Steinert, John P. Torresi, Mrs. David Tyler, Arthur Wilshaw.

Necrology

Dr. Donato V. Catalano, a member of the Institute of Arts and Sciences for the last five years, died October 16 at his home, 990 Castleton Avenue. Dr. Catalano was a prominent surgeon, gynecologist and civic worker, a former President of the Richmond County Medical Society, head of the medical board at St. Vincent's Hospital for a year, a member of its executive board and head of several committees; a fellow of the New York Academy of Medicine; fellow of the American College of Surgeons; member of the American Medical Association and active in medical affairs in other boroughs of the city. He received his medical degree at Jefferson Medical College, Philadelphia. Dr. Catalano was born in Italy and came to this country with his family when a child. He attended Public School 17 and was graduated from Curtis High School. During World War I he served as a captain in the Army Medical Corps in France. He took much interest in civic and welfare work on the Island, headed for a time the professions and services division of the Staten Island Community Chest, and was a director of the Staten Island Tuberculosis and Health Committee, and a member of the Rotary Club.

Philip Lasker, of 74 Winter Avenue, New Brighton, a member of the Institute since July, 1925, died October 14. Mr. Lasker was a native of Latvia, and had been a resident of Staten Island for forty-five years. He was active in religious and civic affairs, and was vice president of Temple Emanu-El, Port Richmond, and a member of its board of trustees; a past master of Aquehonga Lodge of Free and Accepted Masons; member of the Staten Island Lodge of Elks; Staten Island Lodge, B'nai B'rith; Congregation Agudath Achim Anshe Chesed; and Staten Island District, Zionist Organization of America. He was also active in the Democratic Party on the Island, and was affiliated with the Andrew E. Zimmer Fish and Game Protective Association and the Staten Island Sportsman's Club.

Mr. Herbert McCreary, a member of this Institute, died December 27, 1949, at the home of his son, Richard McCreary, Fremont, Ohio. Until last summer Mr. McCreary lived at 341 Bement Avenue, Staten Island. For many years he was principal of Public School 18. He was also President of the Board of Trustees of Calvary Presbyterian Church, and was active in its work.

Mrs. A. A. Rottmann of 86 University Place, Silver Lake, died December 26 at her home. Mrs. Rottmann was a member of the Woman's Auxiliary of the Staten Island Institute of Arts and Sciences, and had long been active in its work, as well as in that of its Bird and Nature Club and Horticultural Society. She was also a member of the Brighton Heights Reformed Church.

Institute Notes

The Annual Christmas Concert was given Saturday evening, December 17, in the auditorium of McKee High School, to a large and appreciative audience. The program included choruses from Händel's "Messiah," sung by the Staten Island Oratorio Society under the direction of Harry Russell; three selections, "Romance," Debussy; "Gavotte," Leclair; and "Jesu Bambino," Pietro Yon, by a trio from the Staten Island Symphony Society consisting of Mrs. Rosa Judd, Violin, Mrs. Dorothea Seesselberg, Cello, Mrs. Helen Haydock, Piano; two numbers by the Treble Choral Ensemble, Miss Marjorie Sunderman conducting, the first including the Prayer from Hänsel and Gretel, Humperdinck, an Old French and an Old English Carol; and the second, "Slumber of the Infant Jesus," Gevaert, an Appalachian Mountain Carol and a Negro Spiritual; and two four-hand numbers by George Martin and Thomas Darson, the first Sonata Op. 6, D Major, Beethoven, and the second, "Variations, Il Maestro e lo scolare," Haydn. The concert was under the auspices of the Staten Island Museum. Presidents of the participating societies are: Arnold V. Schwartz, Staten Island Symphony Society; Mrs. Harold Shadwell, Treble Choral Ensemble; and Leslie Carter, Staten Island Oratorio Society.

An exhibition of work done by the children of the Museum's classes opened January 14, and will remain in place until the end of January.

The Staten Island Camera Club opened its Annual Exhibition of photographic prints in the Museum with a reception January 15. The prints will be on display for a month.

Future Events:

January 21, 1950. William T. Davis Memorial Lecture. McKee Vocational and Technical High School. Colored Motion picture and lecture by Commander Irving Johnson: "Yankee's Wander World."

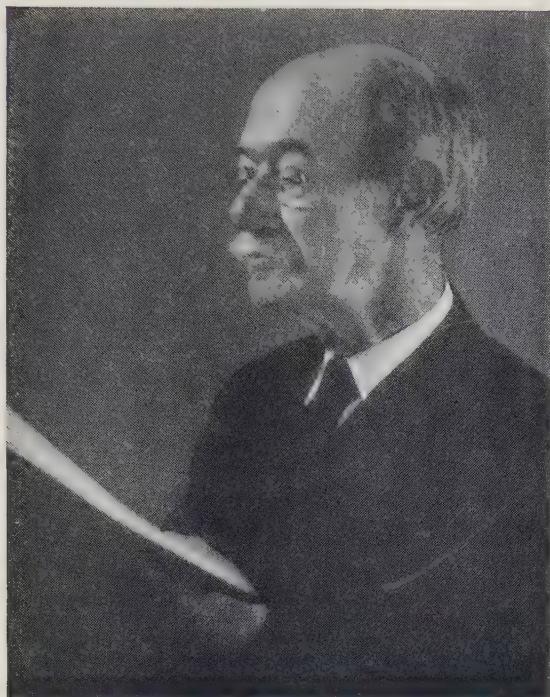
February 18, 1950. Museum Lecture at McKee High School. Colored motion picture and lecture by Clifford J. Kamen on "Italy."

March 14, 1950. The Woman's Auxiliary will sponsor a Fashion Show at McKee High School at 8:00 p.m.

March 18, 1950. William T. Davis Memorial Lecture at New Dorp High School, New Dorp. Colored motion picture and lecture by Cleveland P. Grant, "North To The Yukon."

Accessions

Among interesting accessions since those noted in the October Proceedings are a huge fossil (dinosaur?) tooth found in thirty-two fathoms of water sixty miles off Cape May, New Jersey, the gift of Ingelbret Ingelbretson; a letter from Edwin M. Stanton (later Lincoln's Secretary of War) to Richard Fox, dated November 5, 1859, the gift of Fox's grandson, Richard Fox Allen; an old negative of the John C. Thompson house, given by Bernard E. Jamme; and an engraving of New York Harbor as seen from Staten Island in 1849, the gift of Chauncey A. Drew.



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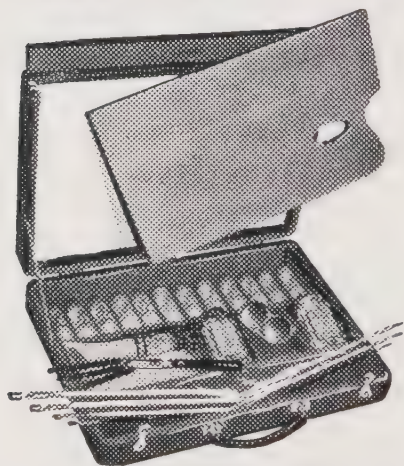
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PROCEEDINGS of the
TATEN ISLAND INSTITUTE
of ARTS and SCIENCES



VOLUME XII

NUMBER 3

April, 1950

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PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES, Vol. 12, No. 3, April, 1950. Published Quarterly in October, January, April and July, by the Staten Island Institute of Arts and Sciences, 75 Stuyvesant Place, Staten Island, N. Y., and entered as second class mail matter at Staten Island, N. Y., October, 1948, under the Act of August 24, 1912. Subscription price \$2.00 per year, included in annual membership fee of \$3.00. Mabel Abbott, Editor.



THE MASTODON
Murál by Jean Leason

(See page 83)

Metalliferous Heavy Sands on Staten Island

LEE A. ELLISON

Whenever gentle rains fall on the hilly portions of Staten Island, little rills form on exposed areas of top soil and wash sand, gravel and pebbles into little watercourses with pockets and fans of fine yellowish sand. These deposits are in their general nature quite commonplace. Sand deposits from little rainwater rills probably occur in nearly all hilly regions where the surface soil is not a coarse glacial drift, and may occur there also, but may have escaped my observation.

If one examines these sand deposits and pockets, especially while damp, he will notice streaks of black, glistening grains. If these grains are scraped from the surface of the sand and given further examination by jigging, panning or other separative methods, it will be found that these black grains are heavier than the accompanying sand. Additional examination with a hand lens or microscope will show that variously colored grains of heavy material also accompany the black grains. That the heavy material should occur on the top of the sand deposit seems strange, until we consider that the lighter sand would be moved faster and farther by the current of water; the streaks of heavy material on the top of the deposit are merely evidence that the heavy material is distributed through the sand pocket in streaks. It may, and often does, occur at any level in the pocket, and is often found on the bottom.

Black, heavy sands of similar appearance may also be found on our beaches, where a mechanical separative action by waves removes the lighter sand more completely than in the rainwater rills. Such deposits on our beaches and in localities other than Staten Island came to the attention of local naturalists between 1930 and 1932*. In the former years Hans Stecher described sands at Montauk Point, Long Island, as having "a high content of magnetic material." Local deposits of this nature were referred to in 1931 by the late Capt. Thomas I. Miller, by the late William T. Davis about the same time, and in 1932 by John Rader, who brought to the museum considerable quantities of this material collected at the foot of the bluff at Prince's Bay. Similar heavy sands have been collected from such widely separated Staten Island localities

* Samuel Akerly, in his "Agriculture of Richmond County (1842) refers to "black sand . . . not earthy but metallic . . . appears to be fine particles of iron ore . . . may be separated by a magnet." These were found on southern shores of the Island after autumn and winter storms.

as Lightner Ave. at Aymar St., Sunnyside; Woods of Arden Road, Eltingville; Latourette Golf Course near London Rd., Meissner Hill; Latourette Golf Course about 100 feet south of Forest Hill Road; along Bloomfield (Chelsea) Road at Chelsea; and on banks of the Staten Island Airport's landing strip near Richmond Ave.

Early in the present investigation it was found that a separation of heavy from light material as collected in the field, could be made by means of flotation in liquids of high specific gravity. For these separations the sand or soil was crushed, if necessary, to completely pass a 40-mesh screen, then given flotation in bromoform, which has a specific gravity of 2.89. It was found that metaliferous grains, some finely-divided oxides of iron, and certain other heavy minerals later described, would settle out when the mixture was swirled with bromoform in a separatory funnel and allowed to settle a brief time. The floated grains were found to consist almost entirely of silica sand, argillaceous, shaly or feldspar particles. After filtration, washing with carbon tetrachloride or chloroform, and drying, the relatively small quantity of heavy sands was ground to pass a 100-mesh sieve, again floated on bromoform, washed, dried, and next subjected to flotation in methylene iodide, which has a specific gravity of 3.33. Such minerals as magnetite, hematite, ilmenite, zircon, columbite, and garnet are heavier than 3.33.

After washing and drying, this material was examined under a magnification of about 20 diameters. The separated grains fell into four general classes: glossy black irregular fragments; glossy or dull black tetrahedrons; glass-clear to deep red transparent grains or prisms often merging into yellowish or greenish color (these are frequently rounded and translucent); irregular gray or varicolored banded fragments.

A further separation was made between the particles that would move vertically one-half centimeter to a magnet of 2600 gauss strength, and those that were feebly magnetic or inert. In the latter group always occurred the clear or translucent pink, red, yellow or greenish grains. These separations having been made, it logically followed that visual separation of these various particles should be done. This was attempted but not carried to any particular degree of completion because of its tedious and time-consuming nature. A small amount of the clear reddish grains was separated; their appearance indicated they could be garnets or impure zircons. Analysis proved them to be the latter. The yellowish and greenish particles form a very small portion of the sands, and no attempt was made to identify them by analysis.

By making two classifications—magnetic and feebly or non-magnetic, sufficient material was accumulated to start on a program of chemical analysis. Since the greatest amount of available

material was the sands from near Wolfe's Pond Park at Prince's Bay, this was given exacting study, resulting in the following analysis:

	<i>Magnetic</i>	<i>Non-magnetic</i>
Iron computed as Fe_3O_4	77.89%	
Iron computed as Fe_2O_3		58.56%
Titanium oxide TiO_2	13.76	36.22
Zirconium oxide ZrO_2	0.43	1.90
Columbium oxide Cb_2O_5	0.30	0.37
Chromium oxide CrO_3	0.15	0.16
Copper oxide CuO	0.32	0.07
Manganese oxide MnO	0.55	1.15
Zinc oxide ZnO	0.96	0.31
Silica SiO_2	2.85	1.25
Vanadium oxide V_2O_5	trace	trace

These analyses are incomplete, as will be elaborated in the concluding discussions of this article.

Without extensive petrographic, spectrographic and micro-analytical investigations, the identity of the separate minerals present can only be inferred. The mineral magnetite certainly accounts for the magnetic iron oxide; the titanium is doubtless present as ilmenite rather than rutile. Zirconium oxide is quite certainly combined with silica to constitute one of the many classified forms of the mineral zircon.

For comparison, analyses were made of heavy sands, separated as above described, from two other localities: the Forest Hill Road location previously listed, and the deposit at Aymar and Lightner Aves. These analyses follow:

	<i>Forest Hill Road</i>	<i>Lightner Ave.</i>
	<i>Magnetic</i>	<i>Non-magnetic Mixture</i>
Iron computed as Fe_3O_4	70.28%	
Iron computed as Fe_2O_3		23.40%
Calcium oxide CaO	1.75	3.36
Aluminum oxide Al_2O_3	0.26	13.95
Titanium oxide TiO_2	23.04	18.54
Zirconium oxide ZrO_2	0.19	8.82
Columbium oxide Cb_2O_5	Not determined	0.54
Manganese oxide MnO	0.27	0.41
Chromium oxide CrO_3	0.07	0.85
Zinc oxide ZnO	trace	0.66
Nickel oxide NiO	trace	0.28
Silica SiO_2	1.09	0.64
Copper oxide CuO	1.32	trace
		24.65
		1.25
		0.70

Sands from the other localities mentioned were given the flotation and magnetic separations as described, but have not as yet been analyzed. Their microscopical appearance leads us to believe that their composition will be found to be similar to the analyses reported above.

It will be noted that the compositions reported by analysis follow the same general pattern, though differing in the amount of siliceous

and argillaceous or feldspathic material which adheres to the metallic oxides and gives to the individual grains, in many instances, a banded or mottled appearance. The amount of titanium oxide varies widely. Ilmenite is an indefinite mixture of the oxides of iron and titanium; it is usually feebly magnetic.

To learn if sands from other localities had similar properties, sands were collected at a locality near Absecon, N. J. and from a small sandbar on the edge of the Lamington or Black River in Hacklebarney Park, near Chester, N. J. In the latter location the sands give clear indications of having been derived from disintegration of the pegmatite granite which forms the rocky walls of a long gorge through which the river flows. Both of these localities yielded sands that broke down into the same magnetic and heavy classifications. The composition of their "heavy" portions is given in the following incomplete analyses:

	<i>Absecon, N. J.</i>	<i>Hacklebarney Park, N. J.</i>
Iron as Fe_3O_4	65.04%	
Iron as Fe_2O_3		42.94%
Aluminum oxide Al_2O_3 ..		14.60
Calcium oxide CaO		trace
Titanium oxide TiO_2	26.72	3.05
Zirconium oxide ZrO_2		0.39
Columbian oxide Cb_2O_5 ..		0
Manganese oxide MnO	0.44	0.60
Chromium oxide CrO_3		0.10
Copper oxide CuO		0.10
Zinc oxide ZnO		0.18
Silica SiO_2		30.56
Magnesium oxide MgO		3.05
Sodium oxide Na_2O		0.55
Potassium oxide K_2O		0.56

Not all the sandy material that may be collected in rain-washed deposits and depressions in the areas of the Island underlaid by serpentine rocks, follow the above patterns of composition. Some material collected at the bottom of sand pockets close to a serpentine rock outcrop on Aymar Ave. Sunnyside, might be called "heavy sands" from their specific gravity, but proved to be a form of chromite, as shown by the following analysis:

	<i>Magnetic</i>	<i>Non-Magnetic</i>
Iron as Fe_3O_4	85.88%	
Iron calculated as Fe_2O_3		64.34%
Chromium oxide CrO_3	8.79	25.01
Titanium oxide TiO_2	3.20	3.60
Nickel oxide NiO	0.19	0.16
Manganese oxide MnO	0.84	5.50
Magnesium oxide MgO	0.40	0.40
Zinc oxide ZnO	trace	trace
Copper oxide CuO	trace	0

Zirconium and columbium were not determined in these samples.

This material forms true metalliferous inclusions in the serpentine rock and may be considered as having weathered out. These inclusions are now under investigation, awaiting the accumulation of sufficient material to start complete analyses. These inclusions average 52% by weight of the rock material.

It is much too early in this investigation of metalliferous heavy portions of surface or streambed or beach sands to draw specific conclusions. At least four times the present amount of separations and analyses must be done, after securing samples from our local beaches, from the sands and gravel in the Green Ridge and Pleasant Plains sections, and from the Kreisler clay and overlying sand deposits. Also for comparison we should obtain samples from the Albany-Schenectady plains, from the shores of Oneida Lake, from Long Island and from the Pine Barrens of New Jersey. The writer is also mindful that not one analysis but an average of many analyses, furnishes a basis for conclusions.

The reported presence of columbium (niobium) oxide must be verified spectrographically. Columbium and tantalum compounds, though responding to certain well-known precipitants, give poorly defined color reactions or positive identification tests. The probabilities are quite strong that the percentages reported in this article are correct, but they do need spectrographic confirmation before final acceptance. Tests indicate the presence of tantalum in the Prince's Bay sample.

Spectrographic work has been done on the serpentine inclusions from Aymar Ave. In addition to the elements listed in the above analyses, there were evidences of antimony, tin, lead, tungsten and vanadium. Except for traces of the last, these elements have not been separated by my analysis and probably occur in quantities too small to measure by quantitative analysis methods.

The above analyses broadly indicate but do not prove that the metalliferous heavy sands which are not located at the base of serpentine outcrops on Staten Island, but are generally scattered with little relation to underlying rock formations, have had their origin in decomposition of some form of pegmatite granites. Erosion, inundation and glaciation have further complicated the story of their origins. The work of investigating their nature, composition and relationship to rocks has scarcely been started.

"Shaken From A Dream"

WARREN F. ROBINSON



WINE, WOMEN AND SONG
Water-color by Hazel McKinley

In a foreword to the Catalogue of the one-man exhibition of watercolors by Hazel McKinley (February 5 to March 4), Xavier Gonzales wrote: "To the uninitiated, the work of Hazel McKinley does not conform to any academic standard; neither does it follow the trend of any modernism. Her paintings as a whole are an unadulterated form of expression.

"To the average painter, struggling to get deeper into the meaning of form and color, tormented with the idea of searching beyond elemental considerations, the works of Hazel McKinley are like wisps of cool breeze speaking of youth and flight."

Add to the competent Mr. Gonzales' remarks, those which appear in the February 15th Art Digest—"uninhibited paintings which come alive in color as if shaken from a dream . . ."—and one has as fine a description of these fascinating works as anyone could wish.

Certainly this reviewer does not propose to explain what the artist "means" in her paintings. No less a sound representational painter than Winslow Homer once snapped, "If I could say it in words—why would I paint it?" when asked what one of his paintings "meant."

Suffice it to say it was refreshing to be assigned to review these charming paintings! It is to be hoped more such exhibitions may be invited to our "right little, tight little isle" that we may have more opportunity to study all the kinds of painting going on today, without taking a ferry ride to Manhattan.

From the "Poor Butterfly" in the staircase, with its calligraphic net around fragile, lovely colors to such glowing and haunting paintings as "Cameras at Work and Play," Miss McKinley plays her overlapping, exciting colors and entwining textures and lines in a very personal manner.

This reviewer chuckled over "Montezuma Resumes" and "Horsey, Keep your Chin Up!" In "Fantasy in Red," the painter wove brilliant pinks, deep violets, yellow-oranges, together with staccato lines, and I did not try to "figure out what she meant." I just enjoyed it for itself! The artist found pleasure in even the kitchen and hallways and expressed it in her own way. In "Cactus, Cactus, Prickly Thorn," she patterned dots, lines, and color areas in a way to make this smallish picture one of the most pleasing of the show.

While I was chuckling over the artist's visual "comments" in "Wine, Women, and Song," two teen-age boys, who might have served as models for her painting, wandered absent-mindedly into the room. They glanced at two paintings rather blankly, then both boys came to life with startled grunts of "Phew!—Modern Art!" and left the room in a hurry. I turned back to the painting with its purples, greens, and white paper across which teen-agers cluttered about in a tangled dance. On a raised platform the "Bundlers' Band" in the latest sloppy clothing was beating out the rhythm.

I continued to chuckle for I thought of Robert Burns' "— to see ourselves as ithers see us."

Thank you, Miss McKinley, for a peek into your bright world of "colors shaken from a dream . . . !"

The George William Curtis Collection

MABEL ABBOTT

The George William Curtis Collection has now been arranged with a view to making it useful to students of Mr. Curtis and his period. We feel that Staten Island is a peculiarly appropriate place for such a collection, since he lived here for thirty-six years, married here and died here. He had a summer home in Ashfield, Massachusetts, but he spent most of each year here, and identified himself with the Island and with its affairs at all times. He was chairman of the Richmond County (Staten Island) Republican Committee, lay reader in the Unitarian Church, and an honorary member of the Natural Science Association (the original name of this Institute). We hope to build up a collection which shall represent adequately the leader in American letters and the powerful fighter for good government and civic reform; but we think we may reasonably be expected to be particularly a source of information concerning his local contacts and activities, and it is our ambition ultimately to be able to meet this expectation.

Small and new as it is, the collection already has received inquiries and visits from many quarters. We trust the following inventory of our material may be of service. Thanks are due to the Hayes Memorial Library, at Fremont, Ohio, and to the Library of Harvard University, for copies of letters from their fine collections, and for their helpful interest.

Books.

We have copies of all of Curtis's books, and of his collected essays, and many articles, prefaces, memoirs etc., written by him and published in other books.

Also his published letters to John S. Dwight; his Orations and Addresses as collected by Charles Eliot Norton; also "Bigelow's Plants of Boston" with marginal notes; and "Tales for Boys" with his childish signature scrawled in it.

Also biographies of Curtis by William Winter, John White Chadwick, Edward Cary and Charles Dudley Warner; articles about Curtis (not memorials) in "Stories, Legends and Folk-lore of Old Staten Island; the North Shore," Hine and Davis, 1925, and by Eugene Benson in "The Galaxy," March 1869.

Articles

"Literature on Staten Island," in "The Staten Island Magazine," and same reprinted in "The Fair Emprise," "Dissertation on the Absorption of the Suburb (Staten Island) by the City", In Harpers Magazine.

Manuscripts

Twenty-seven packages of manuscript notes on a wide variety of subjects, including one on Staten Island.

Pamphlets

Thirty-nine pamphlets containing addresses, orations and miscellaneous writings. Among them are three delivered on Staten Island on local subjects.

Thirteen pamphlets on local subjects, not written by Curtis but kept by him in his library.

Memorials

Eight memorial addresses and articles.

Galley Proofs

Ten sets of galley proofs of addresses, with author's revisions.

Letters

From George William Curtis to—

President Grant	Dec. — 1871	<i>Copy kept by Curtis.</i>
President Grant	Dec. 26, 1872	<i>Copy kept by Curtis.</i>
President Grant	March 18, 1873	<i>Copy kept by Curtis.</i>
President Hayes	August 31, 1876	<i>Copy kept by Curtis.</i>
President Hayes	Sept. 10, 1876	<i>Copy from Hayes Memorial Library.</i>
President Hayes	March 1, 1877	<i>Copy from Hayes Memorial Library.</i>
President Hayes	March 15, 1877	<i>Copy from Hayes Memorial Library.</i>
President Hayes	Nov. 14, 1877	<i>Copy from Hayes Memorial Library.</i>
President Hayes	Jan. 2, 1878	<i>Copy kept by Curtis.</i>
President Hayes	Jan. 5, 1878	<i>Copy kept by Curtis.</i>
President Hayes	Jan. 9, 1878	<i>Copy kept by Curtis.</i>
President Hayes	Feb. 11, 1878	<i>Copy kept by Curtis.</i>
President Hayes	Feb. 12, 1878	<i>Copy kept by Curtis.</i>
President Hayes	March 23, 1878	<i>Copy kept by Curtis.</i>
President Hayes	July 27, 1878	<i>Copy kept by Curtis.</i>
President Hayes	August 20, 1878	<i>Copy kept by Curtis.</i>
President Hayes	Sept. 30, 1878	<i>Copy kept by Curtis.</i>
President Hayes	Dec. 2, 1878	<i>Copy kept by Curtis.</i>
President Hayes	Jan. 6, 1879	<i>Copy kept by Curtis.</i>
President Hayes	Feb. 13, 1879	<i>Copy kept by Curtis.</i>
President Hayes	Feb. 18, 1879	<i>Copy kept by Curtis.</i>
President Hayes	Feb. 8, 1881	<i>Copy kept by Curtis.</i>
W. K. Rogers (Secretary to the President)	Feb. 11, 1878	<i>Copy kept by Curtis.</i>
James P. Allen	Aug. 27, 1884	<i>Copy kept by Curtis.</i>
Mr. Beach	Feb. 1, 1879	<i>Copy kept by Curtis.</i>
J. B. Blackwell	Nov. 4, 1869	<i>Copy kept by Curtis.</i>
James G. Blaine	April 20, 1878	<i>Copy kept by Curtis.</i>
S. Bassing	Oct. 14, 1884	<i>Copy kept by Curtis.</i>
Theodore Bourne	Oct. 27, 1877	<i>Copy kept by Curtis.</i>
Hon. Geo. S. Boutwell	Feb. 4, 1873	<i>Copy kept by Curtis.</i>
Samuel Burnham	Aug. 1, 1869	<i>Copy kept by Curtis.</i>

James Campbell	Oct. 25, 1869	<i>Copy kept by Curtis.</i>
Francis King Carey	Dec. 17, 1884	<i>Copy kept by Curtis.</i>
W. E. Chandler	Jan. 4, 1875	<i>Copy kept by Curtis.</i>
W. E. Chandler	Jan. 7, 1878	<i>Copy kept by Curtis.</i>
Roscoe Conkling	March 10, 1869	<i>Copy kept by Curtis.</i>
Roscoe Conkling	March 10, 1869	<i>Copy kept by Curtis.</i>
Mr. Cowdin	Aug. 24, 1878	<i>Copy kept by Curtis.</i>
Hon. J. A. J. Creswell	May 2, 1871	<i>Copy kept by Curtis.</i>
Isaac F. Cox	April 22, 1878	<i>Copy kept by Curtis.</i>
William T. Davis	July 15, 1892	Original letter.
Mr. DeKay	March 30, 1877	<i>Copy kept by Curtis.</i>
Hon. C. Delano	Aug. 11, 1869	<i>Copy kept by Curtis.</i>
Hon. C. Delano	Oct. 8, 1870	<i>Copy kept by Curtis.</i>
Hon. J. A. Dix	Nov. 19, 1872	<i>Copy kept by Curtis.</i>
W. H. Eastman	Aug. 8, 1884	<i>Copy kept by Curtis.</i>
Hon. W. M. Evarts	May 21, 1877	<i>Copy kept by Curtis.</i>
Hon. W. M. Evarts	May 28, 1877	<i>Copy kept by Curtis.</i>
Hon. W. M. Evarts	July 4, 1877	<i>Copy kept by Curtis.</i>
Hon. W. M. Evarts	Oct. 27, 1877	<i>Copy kept by Curtis.</i>
F. E. Farmer	Feb. 13, 1878	<i>Copy kept by Curtis.</i>
Rev. Henry M. Field	March 31, 1871	<i>Copy kept by Curtis.</i>
Hon. Hamilton Fish	June 6, 1871	<i>Copy kept by Curtis.</i>
D. G. Garrison	March 2, 1872	<i>Copy kept by Curtis.</i>
Mr. Green	Dec. 12, 1884	<i>Copy kept by Curtis.</i>
Hon. John A. Griswold	Sept. 30, 1869	<i>Copy kept by Curtis.</i>
Mr. Harper	March 15 (16?) 1875	<i>Copy kept by Curtis.</i>
Mr. Hopping	Oct. 24, 1871	<i>Copy kept by Curtis.</i>
Paul Humes	Sept. 16, 1884	<i>Copy kept by Curtis.</i>
Mr. James	Aug. 20, 1878	<i>Copy kept by Curtis.</i>
Mr. James	Aug. 24, 1878	<i>Copy kept by Curtis.</i>
"Dear Ma"	No date. Evidently 1884	<i>Copy kept by Curtis.</i>
Hon. I. W. Marshall	Feb. 13, 1872	<i>Copy kept by Curtis.</i>
Mr. Wendell (Mendell?)	Sept. 22, 1869	<i>Copy kept by Curtis.</i>
Hon. Moody Merrill	March 23, 1875	<i>Copy kept by Curtis.</i>
Hon. Moody Merrill	June 7, 1875	<i>Copy kept by Curtis.</i>
Gen. E. A. Merritt	July 29, 1878	<i>Copy kept by Curtis.</i>
Gen. E. A. Merritt	Feb. 4, 1879	<i>Copy from Hayes Memorial Library.</i>
I. W. Palmer	April 19, 1870	<i>Copy kept by Curtis.</i>
W. Patterson	Nov. 14, 1884	<i>Copy kept by Curtis.</i>
M. G. Peck	Feb. 22, 1878	<i>Copy kept by Curtis.</i>
Judge Pierrepont	Oct. 1, 1869	<i>Copy kept by Curtis.</i>
L. Bradford Prince	Oct. 29, 1877	<i>Copy kept by Curtis.</i>
L. Bradford Prince	Nov. 11, 1877	<i>Copy kept by Curtis.</i>
Hon. Charles S. (G?) Reed	Oct. 11, 1884	
J. B. Richards	Sept. 30, 1878	<i>Copy kept by Curtis.</i>
Mr. Richmond	Nov. 15, 1884	<i>Copy kept by Curtis.</i>
Mr. Roberts	Dec. 3, 1875	<i>Copy kept by Curtis.</i>
Carl Schurz	March 15 (16?) 1875	<i>Copy kept by Curtis.</i>
Carl Schurz	Jan. 5, 1878	<i>Copy kept by Curtis.</i>
Mr. Schwartzkopf	March 12, 1872	<i>Copy kept by Curtis.</i>
Hon. John Sherman	April 10 (18?), 1877	<i>Copy kept by Curtis.</i>
W. E. Smith	Aug. 24, 1878	<i>Copy kept by Curtis.</i>

Hon. E. C. Sprague	Jan. 21, 1877	<i>Copy kept by Curtis.</i>
Hon. F. G. Stebbins	Jan. (?) 1878	<i>Copy kept by Curtis.</i>
Mr. Stone	Jan. 24, 1872	<i>Original letter.</i>
Hon. E. Taylor	April 17, 1878	<i>Copy kept by Curtis.</i>
H. W. Thomson	April 3, 1871	<i>Copy kept by Curtis.</i>
Tribune, N. Y., Editor of	Sept. 30, 1869	<i>Copy kept by Curtis.</i>
Mr. Van Nortwich	Feb. 14, 1878	<i>Copy kept by Curtis.</i>
Mr. Vaughan	Aug. 8, 1884	<i>Copy kept by Curtis.</i>
Mr. Vreeland	Sept. 11, 1878	<i>Copy kept by Curtis.</i>
Henry Randall Waite	Sept. 28 (?) 1876	<i>Copy kept by Curtis.</i>
Marcus L. Ward	March 14, 1867	<i>Copy kept by Curtis.</i>
Isaac J. Wells	Oct. 28, 1884	<i>Copy kept by Curtis.</i>
Gen. J. H. Wilson	Jan. 2, 1878	<i>Copy kept by Curtis.</i>
No superscription	Nov. 4, 1872	<i>Copy kept by Curtis.</i>
No superscription	Oct. 25, 1869	<i>Copy kept by Curtis.</i>
No superscription	Nov. 30, 1869	<i>Copy kept by Curtis.</i>
No superscription	Aug. 14, 1871	<i>Copy kept by Curtis.</i>
No superscription	No date. Probably between 1870 and 1871.	<i>Copy kept by Curtis.</i>
No superscription	Nov. 22, 1871	<i>Copy kept by Curtis.</i>
Probably to President Grant		
No superscription	Feb. 27, 1872	<i>Copy kept by Curtis.</i>
No superscription	March 6, 1872	<i>Copy kept by Curtis.</i>
No superscription	March 5, 1872	<i>Copy kept by Curtis.</i>
No superscription	July 6, 1872	<i>Copy kept by Curtis.</i>
Probably to President Grant		
No superscription	April 15, 1874	<i>Copy kept by Curtis.</i>
No superscription	June 15, 1874	<i>Copy kept by Curtis.</i>
No superscription	Sept. 6, 1874	<i>Copy kept by Curtis.</i>
No superscription	May 11, 1875	<i>Copy kept by Curtis.</i>
No superscription	May 9, 1875	<i>Copy kept by Curtis.</i>
No superscription	March 31, 1877	<i>Copy kept by Curtis.</i>
No superscription	No date. Probably between Feb. 22 and March 23, 1878.	<i>Copy kept by Curtis.</i>
No superscription	Feb. 16, 1878	<i>Copy kept by Curtis.</i>
No superscription	Nov. 23, 1878	<i>Copy kept by Curtis.</i>

Letters

To George William Curtis from —

Taylor Lewis	Jan. 28, 1865
Elizabeth Cady Stanton	July 23, 1867
Hamilton Fish	June 1, 1871
Hamilton Fish	June 2, 1871
S. Shellabarger	June 20, 1871
"C. E. J."	Aug. 9, 1871
W. Nichols	Nov. 29, 1871
J. W. Marshall to Joseph H. Blackfan. (Apparently forwarded to Curtis)	Dec. 29, 1871
J. M. Wilson	Jan. 10, 1872

George C. Gorham	Jan. 16, 1872	
Geo. W. Williams	April 16, 1872	
E. B. Elliott	May 27, 1873	
R. B. Hayes	Dec. 31, 1877	(Photostat from Harvard University Library)
Jas. N. Tyner to The President. (Apparently forwarded to Curtis.)	Feb. 20, 1878	
R. B. Hayes	July 31, 1878	(Photostat from Harvard University Library)
J. Q. Howard	Aug. 10, 1878	
T. L. James	No date. Probably soon after Aug. 20, 1878.	
E. A. Merritt	Jan. 24, 1879	
R. B. Hayes	Feb. 5, 1879	Copy from Hayes Memorial Library
E. A. Merritt	Feb. 11, 1879	
E. A. Merritt	June 13, 1879	
Jno. Cleves Symms	Jan. 29, 1880	
George Hoadly	July 1, 1880	
R. B. Hayes	March 11, 1881	(Photostat from Harvard University Library)
Wm. Fearing Gill	March 31, 1881	
E. P. Whipple	Jan. 25, 1882	
William Potts	Sept. 26, 1882	
William Potts	Sept. 29, 1882	
Lucy Stone	Dec. 10, 1885	
J. H. Warwick	June 5, 1887	
Edward Curtis	June 19, 1887	
Lucy Stone	Nov. 11, 1888	
Lucy Stone	Feb. 6, 1890	
J. C. Humphries	Jan. 7, 1891	
Frederic Taylor	Oct. 31, 1891	
Wm. Wilberforce Newton	Sept. 30 —	

Miscellaneous Material

Working Copy of "An Act to Revise and Consolidate Laws Relating to the University of the State of New York."

Other matter relating to the University.

Resolution, in duplicate, signed by numerous residents of Staten Island, protesting against acceptance of Curtis' resignation as Chairman of Republican County Committee.

Leaflet, — letter from G.W.C. to "James Torrey Esq., Secretary", acknowledging election as Recording Secretary of the Grant and Colfax Club of the 2nd and 3rd Districts of Castleton, Staten Island, and accepting same.

Cartoon from *The Hour*, N. Y., July 29, 1882.

Leaflet, Order of Exercises at Bi-Centennial Celebration of Richmond County, Nov. 1, 1883.

Clippings, programs, etc.

Staten Island Camera Club
(The Section of Photography)

ELLIOTT CHAPIN



REFLECTIONS

Photograph by William Flader; winner of the Camera Club's
"Print of the Year" contest.

One of the main events of the year for the Section of Photography is the annual exhibition of the work of the members. This year the exhibit was opened on Sunday, January 15, with a reception at the Museum.

Making up the exhibit were more than seventy-five prints, all made by members. Each member who wished to place a print on exhibition was permitted to hang at least one print of his own choosing, and additional prints were chosen by the print committee, headed by William Flader. Thus the work which was displayed was not only a showing of what judges might consider the best alone pictures, but also represented favorite pictures of the makers, an opinion not always shared by print judges.

Also included in the exhibit were winning prints in the "Print of the Year" contest held last June. This is another annual feature of the club. Held in June each year, the best prints of the previous season compete for the "Print of the Year" title and award. On display were "Reflections," the winner of the contest, by William Flader; "Spring Morn," runner up, also by William Flader; "Familiar Scene, Different Mood," and "Indian Summer" both honorable mention award winners, both by William Sullivan.

At this exhibit, the Staten Island Camera Club celebrated its fifteenth year of existence. An anniversary cake was cut by Frederick Adams, the only charter member of the club who still holds membership. Mr. Adams presented the first slice to Roswell S. Coles, Director of the Institute.

Guests included members of other camera clubs throughout the Metropolitan area, as well as representatives of the Metropolitan Council of Camera Clubs, in which the Section of Photography plays an active part. The exhibit and the program were well recorded photographically, and the Staten Island Advance ran a story with pictures.

The subjects portrayed included scenic, architectural, portrait, still-life, pets, nature, photogram, marine, action, snow, and industrial photographs. Among those whose photographs were exhibited were: Joseph Marzullo, Mrs. Lucie Adams, Thomas J. Fisher, Mrs. Maxine White, Miss Vita LaMarca, Mrs. June Dennis, Daniel Dennis, Bernard Gluck, Herman Gluck, Elliott Chapin, Alfons Wallich, Michael Koledo, William Hunn, J. Pelligone, Ferd Olson and Betty Vosburgh.

An expression of thanks and appreciation must go to the refreshment committee headed by Mrs. June Dennis.

The other activities of the section have included monthly print contests, in which competition has been keen, and monthly color slide contests, in which the competition has been even keener. Point scores are kept each month, and are accumulated, so that the yearly total determines the winner. At present the first five or six scorers in color are within five points of each other. Each month the club has a lecture or demonstration on some phase of photography by prominent photographers or speakers. At these lectures, or at our contests, anyone interested in photography will be welcome.

The Verrazzano Program

DANIEL SANTORO

Historically minded Staten Islanders of Italian descent who have been trying for several years to secure recognition for their countryman, Giovanni da Verrazzano, as the discoverer of Staten Island (as well as the Bay of New York and the mouth of the Hudson River) are much encouraged by the interest shown in their most recent efforts. The year 1949 represented the 425th anniversary of the da Verrazzano explorations and the Staten Island Italian Historical Society, following a post-war reorganization and affiliation with the Museum, arranged a series of programs to commemorate and popularize this important historical event.

As every school boy knows, Henry Hudson is generally credited with the discovery, in 1609, of Staten Island, New York harbor and the river which bears his name. However, there can be little question that eighty-five years before Hudson's voyage, da Verrazzano did explore most of the east coast of North America (from what is now about Georgia to Labrador) and since, in this locality, he speaks of sailing only in the daytime it would have been difficult indeed to have missed New York harbor. Further evidence is seen in another item in his report to his patron, Francis I of France, quoted in Leng and Davis's *Staten Island and Its People* (Vol. 1 p. 85) which "fits so well with the features of New York Bay, the Narrows, and the hills of Staten Island, that by general accord Verrazzano is acclaimed the discoverer."

A discussion of the historical evidence which underlies Verrazzano's claim to fame is beyond the range of this report but considerable attention is given to it in the *Collections of the New York Historical Society* (Vol. 1, New Series, 1811) and in Winsor's *Narrative and Critical History of America*, Vol. 1, p. 1, and to a splendid new volume, *When New York Was Called Angouleme*, by Jacques Habert, if the reader wishes to go deeper into the subject.

At any rate, the inability of Francis I to capitalize on the discoveries of da Verrazzano led to a long period of neglect of this section of the New World and it was not until the time of the Dutch, subsequent to Hudson's voyage, that a settlement was established. Under these conditions it was easy to ascribe the "original discovery" to Hudson.

The commemoration of da Verrazzano's discovery by the Staten Island Italian Historical Society involved four related programs. An edition of 2500 pamphlets, "Giovanni da Verrazzano,



MONUMENT TO GIOVANNI DA VERRAZZANO,
BATTERY PARK, NEW YORK.

*(Courtesy of the New York City
Department of Parks.)*

"A Short History of His Discoveries," was prepared by the writer and distributed to individuals and organizations. An interesting exhibition relating to da Verrazzano and to the Italian backgrounds of American culture was presented in Public School 39. At the principals' meeting held in the school on February 6 an Italian-style lunch was served by members of the Parent Teachers Association and the writer spoke briefly about the importance of the celebration. The success of this event was due in no small part to the cooperation of Assistant Superintendent of Schools, Dr. I. Victor Burger, to Dr. Augusta Goldin, Principal of P.S. 39, and her staff, and to the people of South Beach, whose donations made the exhibit possible.

On February 11 the Society held a dinner at the Great Kills Inn. The president, Mr. Ralph Cerreta, presided, Dr. Natale Colosi acted as toastmaster and the speakers included Dr. Albert Corey, State Historian, Mr. Loring McMillen, Director of the Staten Island Historical Society, Mr. Roswell S. Coles, Director of the Staten Island Museum, and the writer. At this event the writer proposed two further steps in the celebration of da Verrazzano's discovery, the naming of a new Staten Island ferry boat for him, and the placing of a bronze plaque in the Borough Hall in his memory. A further step was also suggested, the celebration of the centenary of the visit of another great Italian, Giuseppe Garibaldi, and the restoration of the Garibaldi-Meucci house on Tompkins Avenue.

Finally, and again with the cooperation of Staten Island schools, an essay contest was held on the subject of da Verrazzano and his discoveries. Mr. Roswell S. Coles, Chairman, Prof. Jacques Habert, author of, *When New York Was Called Angouleme*, and Mr. John A. Rallo, Secretary of the Society, composed the committee for this event. Cash prizes to the amount of \$65.00 were awarded at a meeting held in the Museum on Saturday, March 4 with the following winners: High Schools—1st, Marie Gracci, St. Peter's; 2nd, Janice Dowd, Curtis; 3rd, Saida Kerr, Port Richmond. Grammar Schools—1st, Jane Wallich, P.S. 18; 2nd, Roseann Orlando, P.S. 39; 3rd, Rosalie Ortolano, P.S. 46. Poster winners—Rosemarie Polidore, Charles Thompson.

We note with interest and pleasure the announcement that the subject of the Sixth Annual Contest of the French Folklore Society, for Students of Schools and Colleges in New York and Vicinity, sponsored by the New-York Historical Society, will be "The Discovery of New York Bay, 1524."

The Staten Island Italian Historical Society is indebted to a number of individuals who have helped to make our celebration a success. The honorary committee consisted of: Hon. Cornelius A. Hall, President of the Borough of Richmond; Hon. James J. Murphy, Representative in Congress; Hon. Andrew G. Clauson,

Jr., Member of the Board of Education; Dr. I. Victor Burger, Mr. Loring McMillen and Mr. Roswell S. Coles. Assistance was given in setting up the essay contest by Mr. Abraham Rubin, Principal of P.S. 19 and further help was received from Dr. Goldin, Miss Lillian Stamps and Mr. Robert Winston, Principals of P.S. 39, 41 and 46 respectively. *The Staten Island Advance* has been generous in its coverage of these events.

Literature Relating to Staten Island

When New York Was Called Angouleme, by Jacques Habert,
The Trans Ocean Press, N. Y. 1949.

This little volume is a scholarly and well written addition to the history of New York and of Staten Island, as well as a valuable source of information on the early exploration of our country. It is, in essence, a critical essay on the report of Giovanni da Verrazano to Francis I of France, following his exploration of the coast of North America in 1524, with much additional background material, and includes four appendices: a list of manuscripts and maps bearing on Verrazano's voyages; Verrazano and the historians; the Captain of the Dauphine and Verrazano's monument in New York City.*

The author, a teacher in the Lycée Français in New York, states in his foreword that his book was brought out in 1949 to help commemorate the 425th anniversary of the Verrazano voyage and to tell the story in a simple way, from beginning to end in relation to other events of the time. He recognizes the difficulty of combining in a single volume an approach suitable for both the general public and for those interested in documented history, but he has done very well with this difficult task.

The careful preparation of this book, its documentation and its inclusion of previously untranslated materials places the claims for Verrazano as the discoverer of New York on a much firmer footing and adds considerably to the significance of the celebration of the current anniversary.

R.S.C.

*It will be noticed that the author of this volume uses the spelling "Verrazano," whereas some other writers use "Verrazzano." The explanation is simply that the name is spelled in so many ways in documents of the period that it is hardly possible to declare any one of the spellings to be right and all the others wrong. The discoverer himself, in at least one place, signed his name "Janus Verra Zanus!"

Cornelius G. Kolff

ROSWELL S. COLES

In the death of Cornelius G. Kolff on February 27, the Staten Island Museum lost a member who had been with us for more than half a century, and a trustee of the Museum for twenty-eight years. Mr. Kolff joined the Natural Science Association of Staten Island (the original name of the Museum) in 1905, and served it with faith and enthusiasm throughout its changes until his failing health made it impossible for him to attend its meetings.

A complete sketch of Mr. Kolff's activities on behalf of Staten Island would require an entire volume of these Proceedings. Hardly any undertaking for its welfare and progress went without his support, and usually his active participation. Many of the organizations to which he belonged have been listed in the press. He was one of the founders of the Staten Island Chamber of Commerce, its first secretary, and its president from 1920 to 1923. He held at various times the offices of president and secretary of the Staten Island Historical Society, president of the Belles Lettres Society, president and director of the Conference House Association, and many other organizations. He was the determined supporter of a Free Port for the Island, and was largely instrumental in securing it. He himself summed up his constant devotion to the Island's interests by styling himself "Staten Island's Most Obedient Servant."

Mr. Kolff took great interest in the bits of local history, romance and drama which he ran across in the course of his long and close acquaintance with the Island, and kept a large series of notebooks in which he preserved them. He wrote several small books, which were privately published—"A Staten Island Boy in Holland,"—"Staten Island Fairies," "Harbor of Wooden Shoes" and others. He liked to say, with the well-known twinkle in his eye, that he was "a historical liar," and in these stories he took such liberties with facts as would help the effect; but he collaborated with Charles W. Leng and E. C. Delavan in a Condensed History of Staten Island which was published by the Staten Island Edison Company and was entirely factual.

He served the Museum with the same energy and enthusiasm that he put into everything. Its early Proceedings contain many records of the hospitality that he so enjoyed extending to everything he was connected with. Meetings were often held at his home, he organized picnics for the members, invited them to "The Philosopher's Retreat,"—a log cabin which he built on the side of Emerson Hill for just such purposes—and when he became a Trustee, he brought to the Museum's affairs the same shrewd judgment which had made him the outstanding developer of the Island's real estate. He will be greatly missed in our councils.

We Have A New Section

JEAN LEASON

The Executive Committee of the Board of Trustees approved the formation of a Section of Handcrafts at a meeting on January 16, 1950. The first meeting of the new section was held in the Museum on February 8, 1950. At this meeting, temporary officers were elected to serve until the first annual meeting in April. These officers are Gladys Renfield, President; Ester Tellefsen, Vice President; Beulah St. John, Secretary, and Alice Rietmeyer, Treasurer. This group organized and arranged the exhibition "Crafts for all Ages," which opened Sunday, March 12, and proved to be even more popular than it was last year.

The organizations represented were Girl Scouts, Boy Scouts, Goodhue Children's Center, Police Athletic League, Catholic Youth Organizations, Sea View Hospital, Park Department and the Camp Fire Girls.

Among articles exhibited by members of the Handcrafts Section were: handwrought iron work; jewelry; a variety of hand-painted trays; waste-paper baskets and furniture; weaving; knitting; hooked rugs; hand-woven baskets; hand-painted china and ceramics; leather work; chair caning; hand-made flat silver ware; hand-carved wood-work and silk screen work.

An unusual item was the pair of silver spoons designed by Mrs. Kathryn Renfield, one for the left hand and one for the right.

The exhibition opened on Sunday, March 12, with a program. Mr. Edward T. Hall, Director of the Universal School of Handicrafts, and well-known lecturer, gave the opening address. Miss Gladys Renfield was in charge of the arrangements for the afternoon, assisted by Mrs. Ester Tellefsen, Mrs. Beulah St. John, Mrs. Alice Rietmeyer, Miss Adeline Regine, Mrs. Mary Zomnir, Mr. Barry Fromouth and Mrs. Renfield. Demonstrations were given by Mrs. Sylvia Pederson, demonstrating jewelry making, and Mrs. Mary Zomnir, weaving; Charles Mazzone, 13 years of age, student at Cromwell Center, demonstrated the art of papier-maché work, and Patricia Miller, 12 years of age, also a student of Cromwell Center, demonstrated weaving on a Hungarian loom.

On Sunday, March 19, demonstrations were given by Mr. Barry Fromouth, of hand-hammered copper bowls. On Sunday, March 26th, Mrs. Renfield demonstrated the art of basket weaving, and on April 2nd, Mrs. Anna E. Ohr demonstrated How to Plan a Room on Paper.

Necrology

The Museum has sustained the loss of several valued members and workers since the date of the last Proceedings. We regret to chronicle the deaths of:

Miss Louise Kreischer, 2 West Sixty-seventh Street, Manhattan, who died January 24, 1950. She was the granddaughter of Balthasar Kreischer, who founded the great fire-brick industry and the village of Kreischerville at what is now Charleston, in 1854. Miss Kreischer became a member of the Museum in October, 1848.

Mrs. Irene M. Schaefer, died at her home in Milton-on-the-Hudson, February 20, 1950. Mrs. Schaefer, who had lived most of her life on Staten Island, was a member of the Fortnightly Club for many years, as well as of other women's organizations and was an active worker in the Woman's Auxiliary of the Museum.

Mrs. Edward J. Meurer, of 48 Ward Avenue, who died February 21 while on an automobile trip to Florida, was born on Staten Island, and was well known in numerous organizations in which her executive ability had made her prominent. The Museum was pleased to receive her as a member last July.

Mrs. Charles Wacker, 115 Prospect Street, who met death at the same time as Mrs. Meurer, had been a member of the Museum since last September. She, too, was active in professional and philanthropic organizations. The tragic death of these two new members was a shock to all connected with the Museum.

Mrs. Dora Callisen, of 48 St. Mark's Place, died February 25 at her home after a long illness. Mrs. Callisen was the widow of Adolph W. Callisen, who was a member of the Museum from 1922 until 1937, when he resigned because of ill-health. He was one of the founders of the Belles Lettres Society.

Mrs. Mabel C. Williams, prominent in educational circles, died March 15, after a long illness. Mrs. Williams, whose home was at 141 St. Mark's Place, was a member of many professional, historical and church organizations. She had been a member of the Institute of Arts and Sciences since 1945.

Miss Katherine Grey, a long-time resident of Staten Island, and for many years a member of the Belles Lettres Society, died March 21, at her home in Orleans, Cape Cod, where she had lived for the last three years. She retired some time ago, after an unusually long and successful career on the stage, in which she had played with Augustin Daly, Nat Goodwin, E. H. Sothern, Richard Mansfield and many other leading actors.

Membership

We welcome the following new members who have joined the Museum between the publication of our last Proceedings and March 1:

Ignatius Banasewicz, Miss Mildred F. Behnke, Joseph Bishop, William Clarke, Mrs. Chester A. Cole Jr., Mrs. W. H. Danker, Mrs. Alice Denzler, Miss Jane A. DeWitt, Edward P. Diehl, Mrs. Marjorie Eckhart, Mrs. Lillian F. Freilich, Miss Evelyn M. Hill, Mrs. Josephine Knudsen, Leo Kroner, Miss Ruth S. McLaren, Rev. Andrew C. Long, Wellington D. MacMillan, Miss Jean A. Manahan, Miss Gladys Renfield, Dr. Albert Seligman, Mrs. Jacob Stein, Mrs. Sterling St. John, Jr., Mrs. Elsie H. Thompson.

Accessions

Among the large number of interesting accessions received since the date of our last Proceedings, were the following outstanding items: An Indenture, on parchment, dated 1754, between Thomas Dongan and John Beekman, for land on Staten Island, also a document and letter pertaining to the Mersereau family, all the gift of Elliott R. Burgher; the swimming medal won at South Beach years ago by Commissioner Robert Moses, the gift of Borough President Cornelius A. Hall; a quantity of toys for children living in the South Beach housing project, given by the Kiwanis Club of Staten Island; a large collection of classic piano and vocal music, the gift of Mrs. Gertrude Elzer Bertine, 4705 43rd Avenue, Long Island City; a photostat of the abstract of title to the Ward property on Grymes Hill, from Leslie Carter; a book, "The Meaning of Revolution" from Charles Ericson, and a book, "World Almanac 1950," from Daniel L. Bridgman; magazines from Miss E. Alice Austen, and geological and other specimens from Miss Ruth Tysen.

Institute Notes

Additional Groups. The Board of Trustees of the Museum has approved the formation of one new section and the affiliation of two other Staten Island groups.

The Section of Handcrafts was organized by several members who have been responsible for our annual craft exhibitions, Christmas sale and classes. The craft section is set up "to promote interest and activities among Staten Island craftsmen; to widen their interests and increase their competency by classes, lectures and other activities; and to carry on exhibitions in the Museum and other places on Staten Island." The section invites anyone interested in handcrafts to become a member. A notice of the current handcraft exhibit appears elsewhere in this issue.

The Staten Island Poetry Society was organized in 1947 "to spread an appreciation of poetry through the Island; to encourage and sponsor poetical contests in the Public Schools and High Schools and to urge our own members to write and publish as much poetry as possible." Meetings are held in the Local Board Room of the Borough Hall on the first Wednesday evening of each month.

The Staten Island Italian Historical Society has also become affiliated with the Museum. A description of the current celebrations in honor of the Italian navigator, da Verrazzano, has been prepared for this issue of the Proceedings by the Society's Director, Mr. Daniel Santoro. This article also sets forth the aims and objects of the Society.

One other interesting change should be noted. In order to provide a stimulus for all those working in the fields of sciences, and particularly for those writing for our Proceedings, a Science Seminar has been established to meet once a month. Anyone interested in the scientific work of the Museum is welcome to take part. Joseph F. Burke is Chairman; I.C.G. Cooper, Vice Chairman and Robert O'Connor, Secretary.

The Mastodon

A striking feature of the re-arranged main floor of the Museum is the mural of a mastodon in a Staten Island setting, painted by Jean Leason, our Curator of Art. It towers from the floor to the high ceiling, and looks as if it were about to step out into the room. Miss Leason did much of the work from ladders and scaffolding. Members of the Natural History section did research, and furnished data as to Staten Island flora at the period when these huge beasts actually did roam our fields and hills; and

studies were made of localities where the animal might well have been. The painting has attracted much attention and favorable comment.

Somewhat related to this prehistoric subject is a small diorama which has been arranged by Percy A. Leason, showing a cave-man-artist in the act of drawing a picture of a dead bison. The group is based on one of the prehistoric paintings in the caves of France and Northern Spain. The same painting was used by Mr. Leason as the basis for a drawing in his article in the April, 1949, *Proceedings*, on "New Evidence in Support of the 'Dead-Model' Theory of Prehistoric Cave Art."

Science Exhibition

For many years the April Institute meeting has consisted of an exhibition of microscopic objects held under the auspices of the Staten Island Microscopical Society. This year the exhibition will be expanded to include other scientific subjects and it is expected that Staten Island schools, colleges, industries and agencies will participate more fully than in the past. The resulting exhibition should prove interesting to the spectators and of value to the exhibitors.

The exhibition will be held in the gymnasium of the Staten Island Day School, Stuyvesant Place, St. George on Saturday evening, April 29 from 8 to 10 P.M. Members and guests are cordially invited.

Annual Meeting

The Annual Meeting of the Staten Island Institute of Arts and Sciences will be held in the McKee High School auditorium on Saturday, May 20 at 8:15 P.M. In addition to the election of Trustees as noted in the April calendar and the brief annual reports customary at this time an exceptional program has been arranged. Howard H. Cleaves, noted lecturer and our own Trustee will present a William T. Davis Memorial Lecture, his all-color motion pictures "By Sky Crib to Glacier." Invitations to members and their guests will be mailed in advance of the meeting.

Radio Programs. A weekly series of broadcasts on "Staten Island Today" was inaugurated on Monday, March 6, from the Art Gallery of the Museum. It is planned to continue this series over the Municipal Broadcasting System's stations WNYC and WNYC-FM.

The first broadcast featured Dr. James P. Chapin, President of the Institute, and Art O. Hedquist, Executive Secretary of the Chamber of Commerce, discussing the contributions of the Museum

and the Chamber to the community. The series will concern present-day problems and accomplishments of Islanders, and recollections of the borough's colorful past. The programs are being produced and directed by Mrs. Alice Reichenbach, public relations director of the Museum. Titles of each week's programs will be listed in the calendar.

Oratorio Society

The Spring Concert of the Staten Island Oratorio Society will be given some time in May this year when *Hora Novissima* (Earth's Latest Hour) will be sung under the direction of Harry Russell. This Oratorio was composed by Horatio William Parker, an American, and is generally recognized as one of the finest musical works ever written in this country. The words will be sung in English as translated by the composer's mother, Isabella, from the original 12th century poem written in Latin by Bernard de Morlaix.

The Woman's Auxiliary

Duplicate Bridge Party, April 29 at 8 P.M. in the Museum. Chairman, Mrs. George F. Priemer, assisted by Mrs. Walter Mayer, Mrs. C. J. Rammling and Mrs. John W. Dreyer.

Annual Dessert Card Party, May 16 at 1 P.M. at the Boulevard Hotel, Grant City. Co-Chairmen: Mrs. Thomas J. Bothwell and Mrs. Clifford J. O'Neill.

Players will kindly bring cards for both parties.

The proceeds from each of these Spring card parties will go to the Museum.

Model Apartments. Model apartments in the New York City Housing Authority's two newest housing projects on Staten Island have been furnished and decorated under the auspices of the Museum.

At Todt Hill Houses, a five and one-half room apartment was designated as a model. Mrs. Marguerite Jaeger, decorator for Joseph Jaeger & Sons, achieved a charming interior by combining traditional furniture with modern, and by her choice of lovely accessories. Lieberman's supplied the draperies and linens. An Open House reception was held at the apartment on January 9th, at which members of the Woman's Auxiliary, under the direction of Mrs. Thomas Bothwell, served refreshments. Tenants, neighbors, and civic and housing officials were guests at this reception.

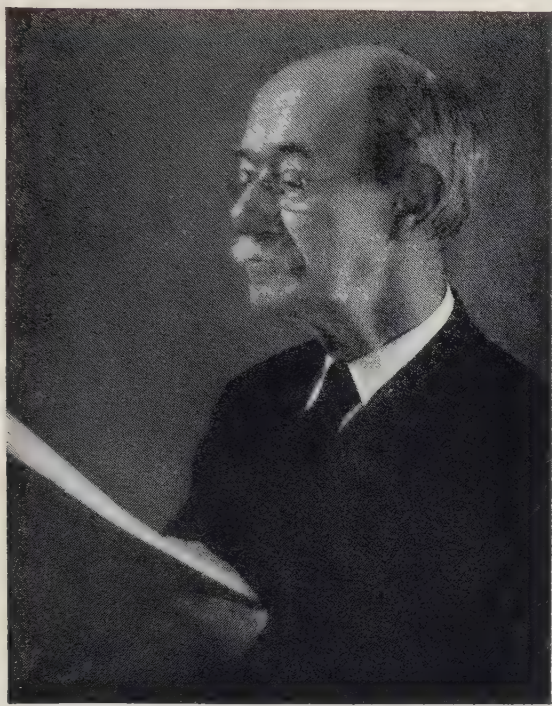
Sunday, February 5, marked the opening of the model apartment at General Berry Houses, Dongan Hills. More than six hun-

dred persons visited the apartment on that afternoon, and hundreds of visitors in the weeks that followed have exclaimed over the attractively furnished four and one-half room apartment, decorated by Farr Furniture and Rainbow Stores.

Mrs. Ester Tellefsen, a member of the executive committee of the Art Section, has served as hostess for the two apartments.

Institute Courses. Eight courses for adults and two for children are being given this spring, with a gratifyingly large registration. They are:

Mondays	Sculpture, Mr. Arthur Lorenzani. Oil Painting, Mr. Percy Leason.
Tuesdays	Home Decoration, Mrs. Alice Rietmeyer. Opera Lecture Recitals, Miss Marcella Geon.
Wednesdays	Ceramics and China Painting, Mrs. Irma Csak. Jewelry Making, Mrs. Sylvia Pederson. Gardening, Herbert S. Walsh, assisted by Mrs. Edgar A. Sleight and Edwin A. Rundlett.
Thursdays	Local History, Charles C. Stoddard.
Saturdays	(Children) Crayon and Poster Painting, Mrs. Helen Friedman. (Children) Drawing and Water Color Painting, Mrs. Lola Gerow.



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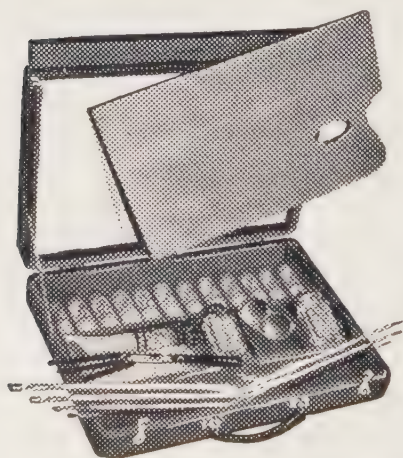
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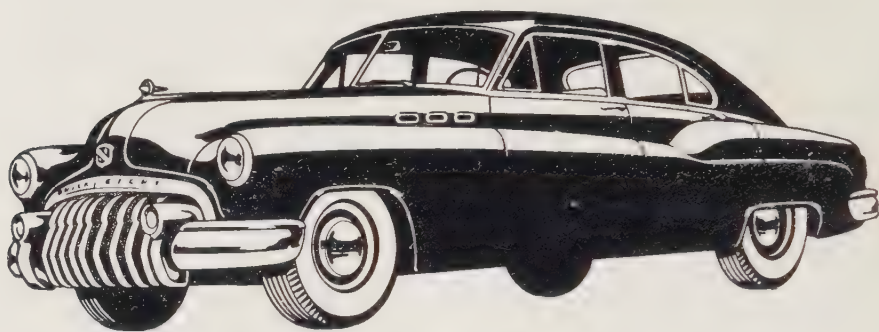
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PROCEEDINGS of the
FATEN ISLAND INSTITUTE
of ARTS and SCIENCES



ANNUAL
REPORTS

VOLUME XII

NUMBER 4

July, 1950

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PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES, Vol. 12, No. 4, July, 1950, Published Quarterly in October, January, April and July, by the Staten Island Institute of Arts and Sciences, 75 Stuyvesant Place, Staten Island, N. Y., and entered as second class matter at Staten Island, N. Y., under Act of August 24, 1912. Subscription price \$2.00 per year, included in annual membership fee of \$3.00. Mabel Abbott, Editor.



MANUEL J. JOHNSON

(Photo by Russart)

Elected President of the Staten Island Institute of Arts and
Sciences, May 22, 1950.

The President's Message

As we enter our sixty-ninth year of service to Staten Island it is with mingled feelings of humility and responsibility that I undertake the office of President.

The deep respect and admiration that I have for my predecessor, Dr. James P. Chapin, and for his fifteen years of active professional help in guiding our Museum, leave me with a sense of humility. I feel deeply also, the responsibility of meeting the many and increasing demands made upon us as a community institution.

A perusal of the following reports clearly indicates that our present building can no longer adequately fill our needs for exhibitions, meetings, programs and storage. We must have larger quarters. Let us all work as one to do everything to build and maintain a more adequate Staten Island Museum — one that will be a credit to our Island and an inspiration and help to coming generations.

I cannot close this message without calling attention to the co-operation and encouragement we have received from Mayor William O'Dwyer, Commissioner of Parks Robert Moses and Borough President Cornelius A. Hall in helping us in our endeavor to be of greater benefit to the people of Staten Island and of New York City of which we are a part.

Manuel J. Johnson

STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES

July 1, 1950

Officers

<i>President Emeritus</i>	Dr. James P. Chapin
<i>President</i>	Manuel J. Johnson
<i>First Vice-President</i>	Dr. Frank A. Strauss
<i>Second Vice-President</i>	Joseph F. Burke
<i>Treasurer</i>	Robert M. Leng
<i>Secretary</i>	Roswell S. Coles

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Borough of Richmond*

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<i>Administrative Assistant</i>	Carla E. Nesslinger
<i>Assistant</i>	Bessie W. Nellis

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<i>Art</i>	Jean L. Hitch
<i>Handcrafts</i>	Gladys Renfield
<i>History and Literature</i>	Mabel Abbott
<i>Librarian</i>	Dorothy A. McCracken
<i>Scientific Periodicals</i>	Joseph F. Burke
<i>Research Associate, Ethnology</i>	Elliott R. Burgher
<i>Research Associate, History</i>	H. Cleaver Brown
<i>Research Associate, Genealogy</i>	Frank P. Bascom
<i>Music</i>	Harry Russell
<i>Prints and Photographs</i>	Daniel L. Bridgman
<i>Science</i>	Robert Mathewson
<i>Davis Collections</i>	Robert J. O'Connor
<i>Research Associate, Algae</i>	I. C. G. Cooper
<i>Research Associate, Ecological Chemistry</i>	Lee A. Ellison
<i>Research Associate, Myxomycetes</i>	Robert J. O'Connor
<i>Research Associate, Microscopy</i>	Joseph F. Burke

Education

<i>Director</i>	Pearl L. Coles
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Instructors

Albert Barbelle	<i>Commercial Art</i>
Mrs. Irma Csak	<i>Ceramics</i>
Mrs. Helen Friedman	<i>Crayon and Poster Painting</i>
Miss Marcella Conn	<i>Opera Lecture Recitals</i>
Mrs. Lola Landry	<i>Water Color Painting</i>
Mrs. Margaret Giro	<i>Rug Making</i>
William Johnston	<i>Oil Painting</i>
Mrs. Doris Jones	<i>Crayon and Poster Painting</i>
Percy Leason	<i>Oil Painting</i>
Arthur Lorenzani	<i>Sculpture</i>
George Martin	<i>Piano Music</i>
Robert Mathewson	<i>Science Discussion Group</i>
Henry J. Murray	<i>Junior Stamp Club</i>

Mrs. Sylvia Pederson	<i>Jewelry</i>
Mrs. Alice Rietmeyer	<i>Home Decoration</i>
Edwin Rundlett	<i>Gardening</i>
Harry Russell	<i>Choral Techniques</i>
Mrs. Edgar Sleight	<i>Gardening</i>
Charles Stoddard	<i>Local History</i>
William D. Sullivan	<i>Junior Photography</i>
Miss Mathilde Weingartner	<i>Nature Handcraft</i>

Public Relations

<i>Director</i>	Alice Reichenbach
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Maintenance

<i>Guard</i>	Andrew Schmitt
<i>Janitor</i>	Howard Coleman
<i>Watchman</i>	Harrison Johnson
<i>Custodian, Britton Cottage</i>	Florence Mathewson
<i>Custodian, Davis House</i>	Mabel Abbott

The Woman's Auxiliary

<i>President</i>	Mrs. Frederick F. Richardson
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<i>Treasurer</i>	Mrs. John W. Stout

REPORT OF THE TREASURER

For the Fiscal Year Ended April 30, 1950

ROBERT M. LENG

Statement of Fund Balances

	<i>Balances May 1, 1949</i>	<i>Increases</i>	<i>Decreases</i>	<i>Balances Apr. 30, 1950</i>
Nathaniel L. Britton Fund:				
Principal	\$ 29,161.57	.....	.....	\$ 29,161.57
Income	939.13	\$ 772.66	\$ 862.73	849.06
William T. Davis Fund:				
Principal	211,392.26	1,513.19	.67	212,904.78
Income	4,192.67	6,095.47	8,749.26	1,538.88
John J. Crooke Fund:				
Principal	2,000.00	.....	.....	2,000.00
Income	35.65	90.00	79.75	45.90
D. M. Van Name Fund:				
Principal	100.00	(100.00)*	.....	.....
Income	9.09	(9.09)*	.....	.....
Building Fund	21,000.00	(100.00)*	1,000.00	20,110.00
		(10.00)		
Endowment and General Funds:				
Principal	9,106.82	11,853.32	3,193.70	17,766.44
Income	1,382.21	(9.09)*	607.19*)	2,339.16
		(5,113.28	3,558.23)	
Special accounts:				
Dues received in				
advance	384.00	(251.00)	.....	133.00
Music	127.83	699.92	901.30	(73.55)
Art	348.43	1,708.30	1,622.04	434.69
Sundry Museum				
courses	985.49	3,814.36	4,799.85	.....
Camera Club	1.00	86.50	78.50	9.00
Britton Cottage				
garden	(612.19)	5.00	(607.19)*	.....
Income tax with-				
holding .....	.....	663.75	411.95	251.80
	<u>\$280,553.96</u>	<u>\$32,174.75</u>	<u>\$25,257.98</u>	<u>\$287,470.73</u>

*Transfer authorized by Board of Trustees.

Represented by:

Securities held by Institute:

U. S. Treasury Bonds \$ 60,700.00

Other 8,549.45

Securities held by City Bank Farmers Trust Co.:

U. S. Treasury (face amount, \$206,500) 208,870.98

Bonds and mortgages \$25,243.08

Less—Reserve 25,243.08

Bonds and mortgages held by Lord, Day & Lord 3,187.50

Cash held by Institute:

Checking account \$ 663.75

Savings account 3,877.75

Petty Cash at Museum 50.00

Cash held by City Bank Farmers Trust Co. 451.44

Accrued interest due to City Bank Farmers Trust Co. 139.84

Nominal value of equity in Museum building, exhibits
& fixtures 1,000.00

\$287,470.73

Analysis of Changes in Funds

INCREASES

Principal:			
Amounts realized from Davis fund mortgages, etc.	\$	1,513.19	
Contribution to Building Fund		10.00	
Herbert F. Stone bequest		11,183.32	
Sale of excess materials		670.00	\$ 13,376.51
Income:			
From securities and cash held by Institute.....	\$	2,070.63	
From securities held by Lord, Day & Lord		113.41	
From securities held by City Bank Farmers Trust Co.		5,912.97	
Dues from members		1,955.00	
Dues from affiliated societies		97.00	
Contributions from Woman's Auxiliary		600.00	
Other contributions		79.00	
Fees from sundry Museum courses		372.96	
Advertising in publications		242.95	
Other miscellaneous income		243.49	11,687.41
Other accounts:			
1950-51 dues received in advance	\$	133.00	
Music section receipts		699.92	
Art section receipts (including Life class)		1,708.30	
Other Museum classes receipts		3,814.36	
Camera Club dues		86.50	
Contribution for Britton Cottage garden		5.00	
Income tax withholdings		663.75	7,110.83
			<u>\$32,174.75</u>

DECREASES

Principal:			
Commission to City Bank Farmers Trust Co...	\$	.67	
Fee to architect for new building plans		1,000.00	
Public relations expenditures		3,036.20	
Purchase of books		157.50	\$ 4,194.37
Income:			
Publications	\$	1,725.45	
Museum operating expenses		3,647.30	
Salary of Director		1,200.00	
Salary of Treasurer		250.00	
Salary of Curator of Davis collections		495.00	
Salary of Summer Assistant		200.00	
Salary of Natural Science Assistant		210.00	
Davis memorial lectures		55.00	
Davis biography expenses		2,230.55	
City Bank Farmers Trust Co. commission		228.70	
Legal fee — annual Davis trust accounting.....		250.00	
Renovation of Natural Science Section		1,600.00	
Books, subscriptions, etc.		79.75	
Britton Cottage expenses		376.37	
Purchase of Tables and chairs		201.85	\$ 13,249.97
Other accounts:			
Music section expenses	\$	901.30	
Art section expenses (including Life Class)		1,622.04	
Other Museum classes expenses		4,799.85	
Camera Club dues transferred		78.50	
Income tax withholdings paid		411.95	\$ 7,813.64
			<u>\$ 25,257.98</u>

THE WOMAN'S AUXILIARY

HELEN J. ANDERSON

The meetings of the Auxiliary are held on the last Wednesday of each month from October through May, and the Executive Board meets on the third Thursday of each month. Officers for the year just ending were: President, Mrs. Frederick Richardson; First Vice-President, Mrs. Edward Bungay; Second Vice-President, Mrs. Thomas J. Bothwell; Third Vice-President, Mrs. Charles Berry; Recording Secretary, Mrs. John G. Anderson; Treasurer, Mrs. John W. Stout; Corresponding Secretary, Mrs. Samuel D. Stickle.

One of the highlights of the season was the President's Reception and Tea at the Museum, October 19. Among those attending were some of our Past Presidents, and presidents of many of the women's clubs on Staten Island. Mrs. V. K. Nikander presented a musical program accompanied by Mrs. Mildred Kammeyer, and a movie entitled: "Historic Staten Island" was shown by Robert C. Wigand, Jr.

Musical programs during the year were presented by Mrs. Dorothy Kimmerner, accompanied by Marjorie Sunderman; The Davenport Duo, accompanied by Owen Anderson; Danell Kammeyer, accompanied by Mrs. Kammeyer. We were also privileged to hear the recordings of Barbara Gibson's professional debut on the Telephone Hour.

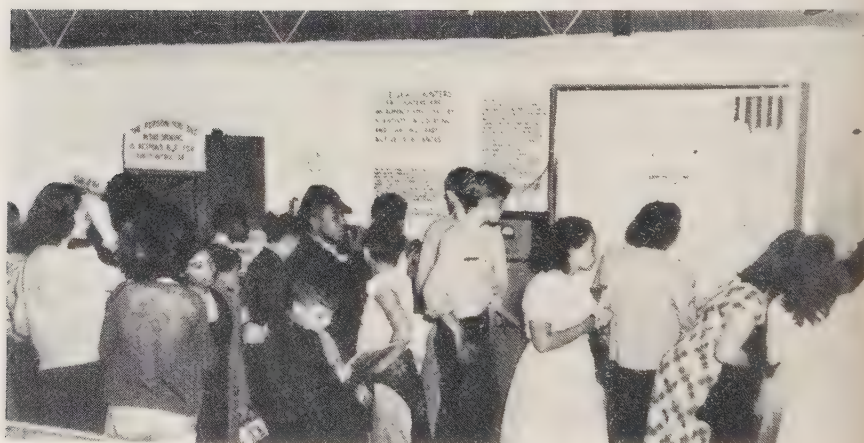
Programs presented by Mrs. Jacob Flatow, Program Chairman during the year included Mrs. Anne Heywood, head of the Housewives' Career Clinic; Miss Caroline Hood, Director of Public Relations at Rockefeller Center; Mrs. Pauline Titus Woodruff, author of "How to Conquer Shyness;" and Ruth Voigt, who related highlights of her recent trip through Germany and Spain.

Following the November meeting the Auxiliary held a luncheon and sale of aprons, fancy work and food, with a white elephant table. This was a success socially as well as financially. A fashion show put on by the Botany Mills was sponsored in March, and an annual card party in May was even larger and more successful than in the past. A theater party to the Paper Mill Playhouse was sponsored in June.

During the year fifty-nine new members have joined the Auxiliary, so that at the present time our membership stands at 413.

At the May meeting our President, Mrs. Richardson, presented a check for \$600 to Mr. Coles for the Museum.

Election of officers took place at the May meeting, and the following slate was unanimously elected: President, Mrs. Frederick F. Richardson; First Vice-President, Mrs. Edward Bungay; Second Vice-President, Mrs. Thomas J. Bothwell; Third Vice-President, Mrs. Samuel D. Stickle; Recording Secretary, Mrs. John G. Anderson; Treasurer, Mrs. John W. Stout; Corresponding Secretary, Mrs. Charles Berry.



Children at Atomic Energy Exhibit
June, 1950

REPORT OF THE SECRETARY AND DIRECTOR

ROSWELL S. COLES

Board of Trustees

Several changes have occurred in the composition of our Board of Trustees. At its annual meeting on May 22, 1950 the Board accepted with regret the resignation of our President, Dr. James Chapin, who had served in that capacity since 1934. Dr. Chapin was elected President Emeritus in recognition of his many years of service to the Institution and Mr. Manuel J. Johnson was elected President.

Mr. Joseph F. Burke was elected Second Vice-President to fill the vacancy caused by the death of Mrs. A. W. Hoffmeyer and Messrs. Harold Schéminger and Hugh Jamieson were elected Trustees to fill vacancies caused by the resignations of Mr. Edward J. Stothers and Mrs. Viola M. Carew. The passing of Mr. Cornelius G. Kolff, was noted in our *Proceedings* of April, 1950. Miss Mary M. Blair, newly appointed Assistant Superintendent of Schools for the Borough of Richmond, was welcomed as a member of the Board on April 17, 1950.

During the year we made slow but steady progress toward a new building. Public announcement was made by Borough President Hall that the St. Mark's site will be named the William T. Davis Park, a most fitting designation for the new museum site. Preliminary studies are being prepared by the architectural firm of Brown, Lawford and Forbes and it is expected that plans and specifications will be ready this year. A contract between the Institute and the City of New York relating to the new building is at present in preparation.

The long awaited biography of Mr. Davis was published by Cornell University Press on October 20, 1949. A tea in honor of the author, Miss Mabel Abbott, was held in the Museum November 13, 1949.

The William T. Davis scholarship was awarded to Andrew Smith, one of the members of the Museum biology group, in the form of an assistantship in the Museum's department of science. Robert J. O'Connor was appointed Curator of the Davis Collections on October 17, 1949, taking the place of Mr. John Westner who died September 5.

The Board of Trustees approved the opening of a Museum Shop to serve as an outlet for work of Island craftsmen and as a supply center for articles relating to our Museum activities. It also approved of a Department of Handcrafts with Gladys Renfield as

Curator. Hopes of operating centers at various housing projects were dimmed by failure of the City to supply needed personnel but the center at South Beach has been opened under the supervision of Mr. and Mrs. Jerome Campbell.

Thanks are again due to the Staten Island Savings Bank, Mr. George Hall, President, for continued use of the Davis House as offices and library. Without this generous support it would be almost impossible to operate.

Fellows

Dr. Walter C. Langsam, President of Wagner College, and Father Bernard Hubbert, O.S.A., Principal of the Augustinian Academy, were elected Fellows by the Board of Trustees on April 17, 1950. The new Fellows were presented with the following citations at our 68th Annual Institute Meeting on May 20, 1950.

DR. WALTER CONSUELO LANGSAM:

Since assuming the Presidency of Wagner College and coming to Staten Island to live you have endeared yourself to the people of the Island by your generous participation in community affairs. Under your direction the College has become a true community college and a symbol of all that is best in higher education for both young people and adults. Under your leadership, present plans for the enlargement of plant and educational scope will insure an even greater and more useful Wagner College.

Your achievements before coming to Staten Island are likewise noteworthy. Successful experience in education at Union College and Columbia University is a fitting background for your present work. You are also the author of several books, one of which, "The World Since 1914" has gone through six editions and many re-printings. Your latest book "Francis the Good" was published in 1949.

You have also taken an active part in many professional organizations. These include: The American Historical Association, the Council on Foreign Relations, the Foreign Policy Association, the Society of American Historians, and American Association of University Professors. You are a Fellow of the American Geographical Society, Honorary Member of the Burke Society, President of the Staten Island Protestant Council and Member of the Board of Trustees of the Lutheran Theological Seminary in Philadelphia.

In recognition of the achievements cited herein you have been elected a Fellow of the Staten Island Institute of Arts and Sciences by unanimous vote of the Board of Trustees, April 17, 1950.

REV. J. BERNARD HUBBERT, O.S.A.:

Tonight we honor you for fifteen years of devotion to the education of the youth of Staten Island in the sciences. After graduation from Villanova College in 1931, you were ordained in 1934. Following this, you came to Staten Island, to the Augustinian Academy, where your successful endeavor led to your appointment as Principal in 1944.

We honor you, therefore, as a religious leader in our community who has combined with his devotion to education a deep interest in the natural sciences, which this Institute is also designed to promote. The educated man must be prepared to understand and accept the methods and findings of honest research, and to fit them into his Faith in this beneficent Universe. Your interests in this direction have led to your election as President of the Catholic Science Council of the New York Diocese.

As with all true educators, your great contribution to Staten Island is to be found in the numbers of young men who will enjoy better, more understanding lives because of your leadership. Such a contribution, though difficult to measure, goes on growing in the hearts and minds of those so fortunate as to have studied with you.

In recognition of the achievements cited herein you have been elected a Fellow of the Staten Island Institute of Arts and Sciences by unanimous vote of the Board of Trustees, April 17, 1950.

City of New York

The City of New York appropriated \$24,940.00 for annual expenses including salaries and \$5,700.00 for repairs to the Museum building. We wish to thank Mayor William O'Dwyer and Commissioner of Parks Robert Moses for their personal interest in the work of the Museum and also express appreciation for the many kindnesses of Borough President Cornelius A. Hall and our Borough departments. The Board of Education has again accredited our Museum courses.

Membership

Three new groups were added this year, a Section of Handcrafts and two affiliated societies, the Staten Island Italian Historical Society and the Staten Island Poetry Society. Reports of these groups will be found elsewhere in these *Annual Reports*.

As of June 1, 1950 individual membership was: 2 Honorary Members; 6 Patrons; 11 Fellows; 39 Life Members; 850 Annual Members; 247 Associate Members; 413 Members of the Woman's Auxiliary. The membership campaign conducted by Mr. Manuel Johnson and Mrs. Alice Reichenbach was very successful, bringing in 192 new members.

Institute Council

Three meetings of the Institute Council were held during the year for the purpose of coordinating the many aspects of Museum activity. During the year the following served as officers: W. N. Meyer, President; Walter Kuhn, Vice-President; Carla Nesslinger, Secretary. At the meeting of May 11, 1950 new officers were elected to serve for the coming year: Walter Kuhn, President; Elliott Chapin, Vice-President; Carla Nesslinger Secretary.

Program

Annual attendance at the Museum was 62,737. To this number must be added 2,719 visitors to the Davis House and 522 to the Britton Cottage. Attendance at Museum functions held at other places was 6,014 and, in addition, some 13,000 viewed the three model apartments set up under the direction of the Museum in three New York City Housing Authority projects on Staten Island. Total groups included in the above figures were 936, made up of 563 adult groups, 199 young people's groups and 174 visiting school classes.

During the year the Board of Trustees issued 341 certificates of thanks for volunteer work in connection with our program. Joseph F. Burke, Daniel L. Bridgman, and H. Cleaver Brown have continued in daily attendance. Mrs. Robert Meyer and Miss Mathilde Weingartner conducted the weekly sessions of the Museum Explorers group. Generous technical assistance has been provided by Elliott Burgher, Frank P. Bascom, I. C. G. Cooper, Lee A. Ellison, and Percy A. Leason. We are particularly indebted to Mrs. Frederick A. Richardson and her staff of the Woman's Auxiliary for their generous support during the year.

Institute meetings were held as follows:

OCTOBER 9, 1949—Museum Open House, opened by Borough President Cornelius A. Hall.

NOVEMBER 19, 1949—William T. Davis Lecture, "River of No Return," by Frank Gunnell.

DECEMBER 17, 1949—Annual Christmas Concert, by members of the Staten Island Oratorio Society, Staten Island Symphony Society, Treble Choral Ensemble, George Martin and Thomas Darson.

JANUARY 21, 1950—William T. Davis Lecture, "Yankee Wander World," by Commander Irving Johnson.

FEBRUARY 18, 1950—William T. Davis Lecture, "Italy," by Clifford J. Kamen.

MARCH 18, 1950—William T. Davis Lecture, "North to the Yukon," by Cleveland and Ruth Grant.

APRIL 29, 1950—Twentieth Annual Science Exhibition, by Staten Island schools, colleges, institutions and individuals.

MAY 20, 1950—Sixty-eighth Annual Institute Meeting. William T. Davis Lecture, "By Sky Crib to Glacier," by Howard H. Cleaves.

Accessions

In addition to the accessions reported in the Proceedings throughout the year, we have received a number of important acquisitions since the date of the last report. Outstanding among these are five oil portraits from the estate of Miss Louise Kreischer, and a fine pastel portrait of Miss Anna Shaw (later Mrs. George William Curtis), by Samuel Lawrence, signed and dated 1855. This was the gift of Mr. George W. Curtis of Zephyr Hill, Florida, through Miss Marian Holyoke. Mrs. Pierre Jay and Miss Holyoke have also given a small pencil drawing of George William Curtis made in 1843 by Frank Farley, at Brook Farm, a silhouette of Curtis's mother, a number of letters and papers pertaining to the Curtis and Shaw families. Earle T. Goodnow of Amherst, Mass., has presented us with a letter from William T. Davis to Curtis, as well as clippings and pamphlets. Of interest as part of fire-fighting history on the Island are the Act of Incorporation of the Port Richmond Fire Company No. 3, dated 1857, and the certificate of service of Thomas J. Butler in that company, both framed, the gift of Mrs. Cora L. Fellows. Numerous other accessions have been received, and appreciated. Names of donors appear elsewhere in this Report.

NECROLOGY

During the past year we have had to record the deaths of the following members: Mrs. Anton W. Hoffmeyer, Mrs. Henry J. Murray, John W. Putner, Mrs. I. Gluck, Dr. Donato V. Catalano, Philip Lasker, Herbert McCreary, Mrs. A. A. Rottman, Miss Louise Kreischer, Mrs. Irene M. Schaefer, Mrs. Edward J. Meurer, Mrs. Charles Wacker, Mrs. Adolph W. Callisen, Mrs. Ernest H. Williams and Miss Katherine Grey.

Since the date of our last report we have regretfully to add a name of

Henry F. Chambers, 836 Post Avenue, who died May 17. He was a native of England, but had lived on Staten Island for fifty years. He had been a member of the Staten Island Institute of Arts and Sciences since 1948.

DONORS

Abbott, Mabel	Ingelbretson, Ingelbret
Abraham, Mrs. Albert, Jr.	Jackson, William
Allen, Richard Fox	Jamme, Bernard E.
Austen, Miss E. Alice	Jay, Mrs. Pierre
Bertine, Mrs. Gertrude Elzer	Johnson, Manuel J.
Boecking, Miss Edith	Kaufmann, Louis W.
Boughton, Willis A.	Kiwanis Club of Staten Island
Bridgman, Daniel L.	Koestner, John
Brill, Mrs. Alonzo	Kreischer, Estate of Louise
Burgher, Elliott R.	LaForge, Mrs. Grace M.
Callan, Lester L.	Lunn, M. A.
Cannon, Miss Doris	McCulloch, Dr. E. C.
Carter, Leslie	Miller, Mrs. Agnes V.
Cold, Miss Bertha	Murray, Henry J.
Coleman, Mrs. Lucile	Nesslinger, K. O.
Csak, Mrs. Irma	Ogilby, Miss Elizabeth R.
Curtis, George W.	Olsen, Richard
Drew, Chauncey A.	Parmelee, Col. A. L.
Eisele, Ernest	Reid, Mrs. Daisy
Ericson, Charles F.	Sandberg, Mrs. Rose
Fellows, Mrs. Cora L.	Section of Art, S. I. Museum
Goodnow, Earle T.	Stackman, Albert
Gronan, Mrs. Maelouise	Stone, Estate of Herbert F.
Hall, Borough Pres. Cornelius A.	Thompson, Mrs. Gustave
Hampton, Dr. Vernon D.	Tysen, Miss Ruth
Hankinson, Miss Frances	University of Oklahoma Press
Hicks, Thomas R.	Welsh, Mrs. Harriet
Holyoke, Miss Marian	Whitney, Miss Phyllis A.
Hopping, Fred	Woman's Aux., S. I. Museum
Hunt, Mrs. H. Ray	Woman's Club of Staten Island

DEPARTMENT OF EDUCATION

PEARL L. COLES

This is the second report of the department since its formation in 1949. We like to think of all the work of the Institute and Museum as education, and so it is. But we also carry on a somewhat more formal educational program, our adult and young people's courses, carried out directly under the department. Adult courses are sponsored by Miss Mary M. Blair, Assistant Superintendent of Schools, and the Staten Island Teachers' Association, Mrs. Marie Conroy, President. They are accredited by the New York City Board of Education.

Twenty-three courses were presented during the year, 13 in the fall and 10 in the spring, on subjects relating to our purposes in promoting the arts, sciences and history particularly as they relate to Staten Island. Adult attendance was 255, of whom 144 were Staten Island teachers. Two evening receptions were held for those completing courses and certificates were presented. Dr. Mary E. Meade and Miss Blair were the speakers and informal exhibits of students' work were held.

Courses for the fall of 1950 will start the week of September 18, and registration will be held the week previous to that date.

PUBLIC RELATIONS

ALICE REICHENBACH

Throughout the metropolitan area, word of the Staten Island Museum and its active program is being spread through the medium of the "Staten Island Today" radio program. This series of broadcasts, one of the highlights of the Public Relations program which was initiated last year, is heard each Monday at 10:30 A.M., over Station WNYC and WNYC-FM. The programs are broadcast from the gallery of the Museum.

The selection of the Museum as the agency best qualified to present a Staten Island program over the municipal station was a tribute to the Museum's activity in Island affairs. In the four months since the series has been on the air, we have presented programs ranging from Elliott Burgher's "Staten Island Before the White Man" to Chamber of Commerce President Frank Rock's prediction of what lies ahead for the Island in the next half-century, as voiced in his May 15th "Era of Richmond" broadcast; and from Lee Ellison's peaceful and idyllic "Woodland Trails" to "Atomic Energy," as presented by Robert Mathewson and Professor Trygve Jensen of Wagner College. From time to time programs featuring phases of the Museum's work are presented by members of the staff. Scripts are written by Alice Reichenbach, who is directing the series.

Radio as well as press publicity was achieved last September when the model apartment at South Beach Houses was opened. This apartment, which was furnished and decorated by a committee of volunteer artists, was featured in a two-page spread in *This Week Magazine*, and was acclaimed by the *New York Times* as well as the local press. Artist-decorators Sylvia Pederson and Alice Rietmeyer, along with the Public Relations Director, were invited to appear as guests on Alma Dettinger's "Other People's Business" program on Station WQXR. Committee Chairman Doris Jones appeared with Alice Reichenbach on a special program on WNYC.

The Museum invaded the networks recently, when a trio consisting of Art Curator Jean Hitch, exhibitor Louise Goodrich and Public Relations Director Alice Reichenbach made an appearance on the CBS program "Hits and Misses."

Continuing our efforts in our membership campaign, we have added 192 new members to our rolls since the publication of the last annual report. Renewed impetus was given the campaign at the annual Institute meeting on May 20, when Membership Chairman Manuel Johnson made an appeal for members. The immediate response has been encouraging.

"It's Your Museum," the colored motion picture filmed last summer by Frank Gunnell, has been shown to approximately 1200 members of service groups and Parent-Teacher Associations.

ART

Department of Art

JEAN LEASON HITCH

Our two Annual Exhibitions by Staten Island artists have been held this year as usual, one last October and the other in April and May. The increase in number of paintings submitted and the steady rise in quality of the work is extremely encouraging.

Five one-man shows have been presented, as follows: Francis Owen, Elizabeth Vosburgh, Albert Barbelle, Hazel McKinley and Louise Goodrich.

The "Crafts for All Ages" exhibition in March included all types of hand-made articles. It aroused much interest and was largely attended.

Two exhibitions of work by young people have been held. One was a children's exhibit of water color, charcoal, crayon and poster paintings; and the other was the work of high school students, including oils, water colors and pen-and-ink drawings.

In addition to the activities in the Museum building, four rotary shows were sent to as many Staten Island public libraries.

The Fifth Annual Artists' Carnival and Costume Ball, November 12, at the Boulevard Hotel, was highly successful. Numerous paintings were auctioned as part of the program.

Several paintings of importance have been acquired by the Museum; a Madonna, Italian sixteenth century, artist unknown, from the estate of Herbert F. Stone; portrait of Anna Turner, mid-nineteenth century, unsigned, the gift of Mrs. Alonzo Brill; pastel portrait of Miss Anna Shaw, 1855, by Samuel Lawrence, gift of Mr. George W. Curtis; five family portraits from the estate of Louise Kreischer; painting by Arthur Beaumont, gift of the Section of Art.

Under the direction of the Section of Art, an eight by twelve foot mural painting of a mastodon, and several dioramas have been executed by Jean Leason Hitch, and are now to be seen on the main floor of the Museum.

Section of Art

PERCY A. LEASON

The Art Section conducted its usual activities during the year and in most cases there was progress. In both leading events, the fall and spring exhibitions, the general standard of work was improved and some new exhibitors gave definite promise of still better work to come. It can be said that our two annual shows compare favorably with other collective exhibitions in the metropolitan area. The majority of the painters are frank investigators of the beauties of the visual world, who, in this or any other time, should feel the need to defend that aim.

The same high attendance at the openings of both exhibitions continued. There was more publicity, and the spring show went on the air under the new Museum arrangement with Station WNYC. On this occasion the well known New York painter, Mr. Wilfred Conrow, was to have been our guest speaker but was prevented by sudden illness. The Art Section wishes to record here its warm appreciation of Mr. Conrow's effort.

In other years the Life Class has been held fortnightly because the experiment with the weekly class showed serious falling off in interest. This year the experiment was successful, an average of 15 being present each Friday night.

The landscape outings were well attended and an excellent start has been made for the coming season.

The number of paintings and drawings submitted for the High School Art Exhibition was again very high and the quality of the work remained about the same. The prize winners were interviewed over Station WNYC by the Art Curator, Mrs. Hitch, and in each case spoke hopefully of possible art careers.

Although the officers of the Art Section, like those of other sections, are democratically elected by members of the whole section, they have again come under some criticism for their attitude regarding the current world-wide trends in art. An open forum at present holding a series of meetings to discuss this matter and how it might affect Museum policy in art education.

There were the usual Rotary Exhibitions. Collections of smaller works by members were seen in all the Island branches of the

Public Library throughout the year. The Artists' Carnival again added much to the funds of the Art Section. The large attendance at the Boulevard Hotel raised the question whether it has not become too crowded. Some members feel that this important event might be more attractive as a smaller and more intimate affair. During the year there was a gratifying increase in new members and the total membership of the Section now numbers 214.

SECTION OF HANDCRAFTS

GLADYS RENFIELD

A Section of Handcrafts was formed at a meeting February 8, 1950. Application for the Section had been made to the Board of Trustees in January in a letter signed by Alice Rietmeyer, Sylvia Pedersen, Leo Kroner, Kathryn Renfield and Gladys Renfield.

At this first meeting the Section adopted the following general program:

1. To promote interest and activities among Staten Island craftsmen.
2. To widen their interests and increase their competence by classes, lectures and other activities.
3. To carry on exhibitions in the Museum and other places on Staten Island. A committee was set up to plan for a spring Craft Exhibition. This exhibition was held in March, with weekly demonstrations given by members of the Section. Interest and response were excellent.

The first annual meeting was held May 18. Two craft films were shown: "Hopi Indian Arts and Crafts," and "Crafts of the Fire." The following officers were elected: Gladys Renfield, President; Ester Dahl Tellefsen, Vice-President; Louise Danforth, Secretary; Alice Rietmeyer, Treasurer. Another meeting was planned for June 23, at which time another film will be shown, "Eskimo Arts and Crafts."

A committee is working on plans for rotating exhibits in libraries and other public institutions.

Members will have two social meetings, one in July and one in August.

Members who wish to sell their craft work were invited to display their articles in the Museum Shop. This was opened in the Museum May 14. Among articles on sale are hand made gifts, Museum publications, books on arts and crafts and natural history.

The purpose of the shop is to give artists and craftsmen an outlet. There will also be available supplies for artists, craftsmen and students in the Museum classes; and the craftsmen offer services such as making place cards, monograms, lampshades and jewelry to order, repairing jewelry, engraving, and many other things.



Visitors watch Jean Leason Hitch, Art Curator, painting background for one of a series of natural history dioramas.

SCIENCE

Report of Department of Science

ROBERT F. MATHEWSON

The continued, popular response to the new exhibits and programs presented by the Science Department this past year provided ample reward for the efforts invested.

The 264 groups and classes served tend to support the direction taken by this department. A summary of the activities presented to these groups follows: 174 visiting classes were provided with programs ranging through Indian Lore, Natural History, Physical Sciences and other subjects. Specialized lectures were presented to groups making such demands.

Continued service in the form of movies, lectures and demonstrations was provided to other agencies such as Girl Scouts, Boy Scouts, Camp Fire Girls, and Y.M.C.A.

With the growing awareness of the Museum's place in the community many demands were presented by Staten Island families for information regarding household pests, pets, and natural history finds. The increase in activity has made necessary the writer's resignation as adviser to the Staten Island Youth Council. However, a new group, the Junior Museum Explorers, has been started which fills a need for a nature program for young people aged 9 to 12 years.

Many field trips both with the Museum groups and outside groups were made. This activity is, understandably, fast becoming the most popular of Museum natural history activities.

Two new science shows were presented during the past year. The current one "Atomic Energy" has already demonstrated its popularity. The innovation of dynamic exhibits, each exhibit operated by the public through push buttons, has excited the imagination of visitors who are prompted to investigate the subject matter. We find many reading the labels and asking questions.

The previous show, "Photography," demonstrated many aspects of this popular field. Exhibits showing a model photofinishing plant, lenses employed in photography, photo equipment of the past, and others were shown. The demonstrations of photofinishing provided by Mr. Alfons Wallich in a model darkroom proved popular and educational.

The completion of the Mastodon mural by our Art Curator, Jean Leason Hitch, has greatly enhanced the William T. Davis room. The future treatment of this room will include a series of dioramas highlighting the natural history material of Staten Island. The new cases built this past year will lend themselves well to this treatment.

This report would be inexcusably incomplete if it did not acknowledge the great kindness of those who have given the Science Department the benefit of their help and advice in widely varying fields. They are too many to enumerate, but mention must not be omitted of Michael Reiss, Atomlab, New York City; Dr. John Abersold, Atomic Energy Commission; John D. Jameson, Associated Universities; Dr. David Balber, Brookhaven National Laboratory; Dr. Adolph Stern, Dr. Roscoe Stinetorf, Mrs. Esther Wood and J. Trygve Jensen, all of Wagner College; Dr. Albert Gorbman, Columbia University; Dr. John Volpe, Columbia University; Clyde Gordon, Staten Island Zoological Society.

Section of Natural History

MATHILDE WEINGARTNER

During the past year our 150 members have again supported our various activities with enthusiasm. Attendance at the twelve monthly meetings, the field trips and Study Group meetings has increased. The following programs have been given: Showing of the film "Days Afield" and a short movie taken at the home of Mr. and Mrs. K. O. Nesslinger; Wilson Baden, "Desert Adventure;" Mathilde Weingartner, "My Trip to the Florida Everglades;" Hans Behm, "Staten Island Fungi;" Carlita Nesslinger, "Nesting Survey of Red-eyed Vireo;" Film, "It's Your Museum," with comments by Director Roswell S. Coles; Adolph Friedrich, "Management of a Tung Farm;" Mr. Coles, "It's Cooler in Florida;" Charles Coleman Stoddard, "The Connection of Natural History with the History of Staten Island;" John Pallister, "In the Year 2000;" Charles Pearson, "Western Trip."

The regular monthly field trips visited Reed's Valley, Ward's Point, Woodrow Road, Tipperary Corners, Kreischerville, Woods of Arden Road, Latourette Park, New Springville Park, Watchogue and Brooklyn Botanic Garden. The June trip will be an all-day affair to the New Jersey Pine Barrens. On some of these trips we were guests of Mr. and Mrs. Nesslinger, Mr. and Mrs. Casimir Redjives, Mr. and Mrs. A. Soriano and Mr. and Mrs. Elwood Cole.

The annual all-day hike was led by Mr. Joseph Burke, from Mt. George to Eltingville; Mr. Robert Mathewson led a group on a night-sounds hike, and Mr. Redjives conducted five morning bird walks for the study of spring migrants. Mr. Redjives also gave a special evening class on bird identification. A breeding bird survey is at present being carried on by the members of the bird committee.

The Museum has received a gift of over 100 herbarium specimens from the collection of the late Frank Hankinson, former

Assistant Superintendent of Schools. These specimens, beautifully prepared and mounted, were included in the new herbarium. Members of the herbarium committee contributed about another 100 specimens.

Committees formed and chairmen appointed are: Zoology, Robert Mathewson; Higher Botany, Charles Ericson; Cryptogamic Botany, Joseph Burke; Geology, Roswell S. Coles; Photography, Robert Mathewson; Parks and Parkways, Lee A. Ellison; Britton Cottage Memorial, Edwin Rundlett; Refreshments, Lee A. Ellison.

Members of the Section of Natural History have attended the Convention of the American Association for the Advancement of Science, and the Branchville Nature Conference, and have taken active part in the New York Microscopic Society, the New York Shell Club, the Brooklyn Bird Club and the Torrey Botanical Club. We are looking forward to an even busier season next fall, when we will also sponsor a series of Sunday afternoon lectures on natural history subjects.

Officers for the coming year are: Mathilde Weingartner, President; Casimir Redjives, Vice-President; Carla E. Nesslinger, Corresponding Secretary; Elsie Cole, Recording Secretary; Leonal W. Hoffmeyer, Field Secretary; Karl O. Nesslinger, Treasurer.

Staten Island Microscopical Society

JOSEPH F. BURKE

The season opened with the meeting of October 5 at the Davis House with a talk by Mrs. Ruth N. Nauss, "Résumé of the Life History of *Reticulomyxa filosa* Nauss", a new organism discovered by Mrs. Nauss. On November 2, Roswell S. Coles spoke to the Society on "Field Investigations of Staten Island Rocks." Edwin Rundlett discussed "The Norway Maple Aphid, with Sidelights on Human Nature," at the December 7 meeting. Robert J. O'Connor talked to the January 4, 1950 meeting on "Reproduction in the Lower Plants" and with this meeting the monthly meetings of the Society ended and merged, commencing with the February meeting, with the Science Seminar.

Science Seminar

(Including the Staten Island Microscopical Society)

The object of the change was to encourage a more diversified interest in Science and to encourage other individuals or science groups to participate in Science Seminar discussions on an advanced level.

Lee A. Ellison discussed "Staten Island Heavy Sands and Their Possible Relation to the Serpentine," at the February 1 meeting; I. C. G. Cooper on March 1 addressed the seminar on "Desmids

on Staten Island." At the April 14 meeting Robert Mathewson spoke on "Exploring the Atom" and gave an advance description of the coming exhibit at the Museum on this subject. The season closed with Dr. Frank A. Strauss speaking to the Seminar at the May 12 meeting on "Photosynthesis." In retrospect the talks given during the winter season were of unusual and timely interest and inspired many interesting discussions at the meetings including one at the April meeting that the Chairman was put to it to contain, so lively was the interest of the participants.

Members of the Science Seminar and the Staten Island Microscopical Society were participants in the 20th Annual Exhibition, Science on Staten Island, the continuation of the annual Microscopical Exhibitions. Other participants were Wagner College, Augustinian Academy, New Dorp High School, McKee High School, Port Richmond High School, Staten Island Day School, Richmond Health Center, Beekeeper's Association, S. I. Cancer Committee and the Science Discussion Group of the Staten Island Museum.

The Davis Collections

ROBERT J. O'CONNOR

Early last fall I assumed the responsibility for the care of the insect collections of the late William T. Davis. At this time I merely wish briefly to report the work that has been done with the collections during the past seven or eight months.

The first problem with any collection is that of physical maintenance. Nearly every specimen-box in the collection has been examined, cleaned internally and treated with naphthalene. In addition to this, new labels are being placed on each box so that specimens may be more readily located. This latter procedure has become very necessary because many of the pencilled labels put on by Mr. Davis are becoming very difficult to read.

The collections are being consolidated as a space-saving measure and also for more ready reference. Specimens of one type, as for example the Coleoptera, have been assembled in one vicinity and arranged in the boxes and on the shelves according to the Leng Catalogue. This procedure is a long and tedious process for it involves checking every specimen with the Leng catalogue and then transferring the specimens to the Schmidt boxes inherited from the Notman collection. When this work is finished, the Coleoptera will be in uniform boxes, in the same locality and each specimen will be readily located merely by referring to the Leng catalogue.

The Odonata collection has been completely reworked and except for attaching permanent labels is ready for use. This briefly, is a summary of the physical aspects of caring for the collections.

In addition to this, several requests for specimens of Cicadas to be examined have been received from various universities and from individuals both locally and in other parts of the United States and Mexico.

Several exhibits of insects were placed in the Museum. At the Open House last fall two exhibits—one of Cicadidae and the other of Carabidae in honor of William T. Davis and Charles Leng respectively, were shown. Currently there is an exhibit of insects to demonstrate the wide variation in color among the various species.

Britton Memorial

EDWIN RUNDLETT

The Britton Cottage and Garden are maintained as a memorial to Dr. and Mrs. Nathaniel L. Britton, noted naturalists. The cottage dates back to about 1675. It was presented by Dr. and Mrs. Britton to the Staten Island Association of Arts and Sciences (the former name of this Institute) in 1915, and is being preserved as a splendid example of colonial domestic architecture. The garden is being developed as a Staten Island wild plant sanctuary wherein our fast disappearing plant life can be preserved.

Since the last report the following improvements have been made:

1. A rocky rill has been created at one side of the pool and a large pit has been dug and filled with stones to provide an outlet. The pool could now be put in operation, were it not for the water shortage.

2. The bricks at the top of both chimneys have been re-laid.

3. The high privet hedge along the Cedar Grove Avenue side of the property, and from that avenue to the main gate on New Dorp Lane, has been removed. Maintenance cost has been too great, the hedge obstructed the public's view of the building, and also it created a traffic hazard.

4. The southwest corner of the property has been planted with red chokeberry, winterberry, pinxterbloom azaleas, mountain laurel, sweet pepperbush, huckleberry, flowering dogwood, highbush blueberry and American holly. Virgin's Bower plants have been set along the chain-link fence.

Funds have been approved for structural improvements and re-decoration of the cottage, as well as for further planting in the garden. Much could be accomplished during the present year by voluntary effort of Institute members and friends. The foundation planting of annual flowers might become one of old-fashioned perennials this year without expenditure of budgetary funds.

The Committee will plant wildflowers among the shrubs, and will meet to consider further necessities for the house.

**Richmond County Chapter, New York State
Society of Professional Engineers**

RAYMOND J. REDDY, P.E.

Officers were elected at the Annual Meeting held on January 4th, 1950, as follows:

Ernst P. Neuschwander, President; Lewis H. Rabbage, 1st Vice President; Barnett Kadin, 2d Vice President; Raymond J. Reddy, Secretary; Michael Pisetzer, Treasurer; George H. Swier and Carl F. Ettlinger, Directors for 3 years. Officers were installed by State President George Nicastro.

Continuing the program of last year, meetings were devoted to subjects pertaining to "Staten Island's Growth — Problems of City Planning, Sanitation, Transportation and Housing."

1. Joint meeting with S. I. Society of Architects. "Housing and Construction Problems." Speakers were: William Floyd-Jones, "Report on Proposed Rezoning of Borough of Richmond"; Myron L. Matthews, Vice-President, Dow Services, "Construction Costs"; Samuel A. Turvey, President, S. I. Savings & Loan Association, "Financing Problems."

2. Dr. Natale Colosi, Chairman of Borough President's Committee on Air Pollution, "Current Problems on Air Pollution."

3. Stuart Constable, Chief Park Designer, Department of Parks, New York City, "Proposed Expressways and Parkways for Richmond Borough," with discussions by Cornelius A. Hall, President of the Borough and Harold L. Nelson, Topographical Engineer, Borough of Richmond.

4. William J. Massa, P.E., "Adoption of the Island's Electric Railway by the City Subway System, with new loops from Grasmere to Elm Park and with Buses as Feeders."

5. Thomas K. A. Hendrick, Designing Engineer, Board of Water Supply, "Construction of Merriman Dam", with discussion led by William Goldberg, Department Water Supply, Gas & Electricity, on the distribution of water in Staten Island.

6. Walker S. Lee, Member of New York State Building Code Commission, "Developing Building Codes on a State-wide Basis."

Chapter members served on the Borough President's Bridge Committee, Zoning Committee and Pollution Committee. Nine members were certified to the Municipal Civil Service Commission as Surveyors of Unsafe Buildings. Mark P. Kerr, P.E., resigned from the Chapter, having moved to Long Island, and Rudolph Dueand, P.E., a past treasurer, was lost by death.

Two successful social affairs were held during the year—a “Stag Lawn Party” at the home of Past State President William H. Larkin, and the Annual Dinner-Dance at the Meurot in February, with Carl F. Ettlinger as chairman.

The Chapter recesses during July and August.

OUR NATURALISTS AT WORK

MABEL ABBOTT

From the very inception of the Staten Island Institute of Arts and Sciences, members interested in the natural sciences have carried on special studies in their various lines, and in some cases have made distinguished contributions to their subjects. The third generation of natural scientists is now working in the laboratory, in the field and in the famous Attic of the Museum, generally in spare time, and with no less devotion and persistence than its predecessors. In the belief that what they are doing will interest others, the editor has with considerable difficulty extracted from a few of these men brief glimpses of their avocations, as follows:

Algae

I. C. G. COOPER

Upon appointment one year ago as the Museum's Research Associate in Algae, the writer assumed the task of surveying and recording the algal flora of Staten Island. This involves digesting all old records, relocating the species listed if possible, re-examining the territory for new records of existing forms, and presenting summaries of the work.

Marine algae include those types found on the shore and in and around waters which extend inland in so far as those waters remain brackish. During the past season most of the species recorded for the Island were checked at several shore points. Two, which had been considered as having vanished from the local flora, were relocated at some distance from where they were previously found. One new species was added to the local list. It may be possible to make a satisfactory report of the marine algae within one year.

Fresh water algae are more widely scattered in ponds, streams and on trees and rocks in moist situations. The records and knowledge of this section are still rather limited and considerable time must elapse before a satisfactory report can be published.

Terrestrial algae are a comparatively unexplored section of botany. It has been known for years that such forms exist. All

are microscopic, many are of single cell types. In the few places where these types have been studied, instances of their growth to nine feet below the surface of the ground have been found. Separation of the terrestrial algae involves long and careful culture of samples of soil in nutrient solutions. Several portions of Staten Island soils are now in culture. This study will, it is hoped, continue until an adequate understanding of the relationships between Staten Island soil and its algal flora is developed.

In the meantime the writer will welcome assistance in obtaining collections from various parts of the Island. Before collections are made it is suggested that instructions for preserving, labeling and forwarding specimens be obtained by phone (GI 2-2476) or otherwise from the writer.

Trees, Weeds, Flowers, Insects

EDWIN RUNDLETT

Now that 2,4-D has made the control of dandelions and plantains in lawns a simple matter, my attention has been turned to finding good means of control of two other weeds: Wild Garlic in lawns, and Japanese Knotweed in gardens and vacant lands.

Pond weeds have made boating and fishing in park lakes difficult. Ways to eliminate objectionable under-water weeds are being sought, care being taken to avoid injury to the fish we wish to encourage.

The Park Department uses, under my direction, huge quantities of insecticides of several sorts in the care of street and park vegetation. The public is concerned about possible injury to birds, bees, pets and human beings. To study effects on bees I am raising them adjacent to my garden where insecticides are used. As a member of the Staten Island Beekeepers' Association, I am chairman of the committee studying pollen and nectar plants.

I am raising seedlings of hybrid elms, in the hope of finding types resistant to Dutch Elm disease; and for my personal satisfaction I am also breeding Tall Bearded Irises, with emphasis upon fragrance. Fragrance seedlings have been neglected by other breeders.

Diatoms

JOSEPH BURKE

I am engaged in an analytical study of the diatom genus *Actinopterychus*, including a survey of the recent species occurring on the Atlantic coast between Maine and Florida, calling for a clarification of the species and the determination of the extent of their distribution.

Serpentine Rock

LEE A. ELLISON

A little over a year ago the Microscopical Section undertook among its various members, the task of finding out all we could about the serpentine rock of Staten Island: its composition, structure, effect on plant and animal life, its origin, and a compilation of earlier records of investigations into its nature. To me has fallen the task of making chemical analyses of the serpentine and of the metalliferous inclusions in it, as well as a partial exploration of the ecological aspects. Work has been started on comparative analyses of the ash of trees and plants growing in close contact with the serpentine rock or soil resulting from it due to weathering, as contrasted with analysis of the ash of identical species from soils where serpentine does not occur. I have thus far gotten together samples of ash or of plants for ashing, from sandy Staten Island localities remote from the serpentine, from a granite region in central New Jersey, from soil underlaid by trap rock on the Palisades at Alpine, N. J., and from the serpentine barrens of Chester County, Pa. These analyses require a great deal of time to complete, and I make no promises as to the date when any of this ecological investigation will be completed.

Along with this investigation, it is my plan to make separations of metalliferous inclusions which occur in various forms of the Staten Island serpentine. These I will analyze and compare with analysis of inclusions (if they are present) in specimens of serpentine from other localities. This may shed new light on the origin and composition of serpentine rocks. Heretofore investigation of these inclusions has been confined to chance deposits of weathered-out matter near our serpentine outcrops, while the present method is based on dissolving away the bulk of magnesium silicate to leave the inclusions untouched, both in original form and in composition.

This is scarcely original research, since Dr. Edgar T. Wherry studied the ecology of plants growing on the serpentine barrens of Chester County, Pa. in 1932 and published a paper on his findings. My purpose is merely to extend these studies to our local rocks and the effect of their composition on plants that grow thereon.

Problems Relative to Staten Island Mycetoza

ROBERT J. O'CONNOR

Previous to 1938 only an occasional record of a myxomycete having been collected on Staten Island can be found in the publications of the Institute. Similarly, not a single record of a closely

related group of organisms—the phycomycetes—can be found. Therefore, in order to add to our knowledge of Staten Island Flora (or Fauna) a survey of these forms, as occurring locally, was undertaken and is continuing at the present time.

The collecting of large numbers of specimens from different localities on the Island was started in the summer of 1938. A preliminary list of myxomycetes was later published in an article called "A preliminary list of the Mycetozoa of Staten Island". Since the publication of this list some twenty-five additional species have been collected and will probably be reported sometime in the fall.

One line of investigation, other than the taxonomic, has arisen out of this field work. Geologically, the Terminal Moraine that extends over Staten Island and Long Island is essentially the same. Yet, in comparing Herbarium material in the Hagelstein collection with that in our own, a rather striking difference is noted. Even though the material compared was collected on the Moraine, in both instances, there is a lack of lime-bearing forms in our collection while there is a preponderance of these forms in the Hagelstein collection. This sets up a very interesting ecological problem which is being studied at the present time.

The second line of investigation is also an ecological one, but also involves the question of physiological response, in terms of heredity, of these organisms to their environment. In examining collections of certain species, wide variations in structure are noted—so much so that serial collections, in which one species can be shown to gradually assume the characteristics of another species, are frequently observed. The problem presenting itself, therefore, is whether or not we are really dealing with separate and distinct species due to heredity or whether we are dealing with a single species modified by the sub-strata and general environment on which it is growing.

Thirdly, it seems worth while to establish a permanent record, in the form of photographs in color, of the specimens collected on Staten Island. Toward this end we hope to eventually have a file of kodachromes which will show the major characteristics of each species. The present plan is to photograph the thallus, the sporangium, the spore and lastly any particularly outstanding taxonomic feature. This is being done with the cooperation of Mr. I. C. G. Cooper.

Lastly, collections of phycomycetes are being made. To date some twenty species have been found but await verification by some recognized authority before being reported.

HISTORY AND LITERATURE

Department of History and Literature

MABEL ABBOTT

The largest single operation of this Department during the year just closed has been the publication of "The Life of William T. Davis". The book appeared October 20, 1949. The Cornell University Press did an impressive job of book-making. Reviews have been good and comments from readers gratifying. The book sold well during the winter. Few sales can be expected during the summer, but it is hoped that the holidays will bring another demand.

Sales of other publications have increased. There is a small but steady demand for numbers of the Proceedings; and Mr. Davis' little classic, "Days Afield", and other books, continue to be called for from time to time.

Library

Forty-five books have been added to the library within the year. Every inch of shelf-room is in use, and there is no space for more shelving. More books on special subjects are a constant necessity, and the problem is serious. Despite its limitations, however, the library has shown a noticeable increase in the use of its resources and facilities. The Visitors' Book does not record its constant use by the staff and by several research workers who use it continuously. It shows only the service rendered to Staten Islanders unconnected with the Museum and to non-residents who are interested in matters pertaining to the Island. There were exactly 100 calls of this kind between January 1 and May 1.

The George William Curtis Collection has received a number of important portraits, letters and papers since the inventory was published. These are noted elsewhere under Accessions.

Local History

Our local history sources have been strengthened by the examination and re-classification of our unusual collection of clippings, programs, pamphlets, manuscripts and papers of all sorts and the arrangement of our files of old newspapers. Some of the latter are too fragile for casual consultation, but as a whole the collection is now in useful condition. This has been a heavy and exacting task, in which our Research Associate Mr. H. Cleaver Brown has been of invaluable assistance. Unfortunately, there is no place for the newspaper files but in the attic of the Davis House, where they are not easily accessible.

The in-service courses in Local History under the leadership of Charles Coleman Stoddard were continued last fall and this spring, with extremely good attendance.

Elliott Burgher, Research Associate in Local Ethnology, has spoken on Staten Island Indian history before Boy Scouts and their parents at Trinity Lutheran Church, Stapleton, the Moravian Church at Great Kills, and Messiah Lutheran Church, Annadale, and has held classes at his home for scouts from the Troop of Trinity Lutheran Church, and lent them Indian artifacts to display in the Scout Exhibition on Cromwell Pier on May 5 and 6. He also spoke on "Staten Island Before the White Man" on the WNYC program "Staten Island Today," broadcast from the Museum April 10.

Periodicals

The library has received almost a hundred periodical publications during the year just ended. That means nearly a hundred *titles*; most of them come monthly, some quarterly and a few irregularly. By far the larger number are exchanges; but we also receive a good many which are not on our exchange list, — perhaps because they do not have specific value for our purposes, though interesting in themselves. Some come from as far as Portugal, Finland, Sweden, France, Mexico, Canada and England. The Proceedings and Transactions of most of the important scientific bodies in this country come regularly, and keep our staff and associates abreast of progress. These are ultimately added to the fine periodical library which we have accumulated over many years, much of which is out of print and almost unobtainable. This growing mass of valuable material is not accessible under present conditions, but we dream of some day being able to combine it with the rest of our library, catalogue it and make it as useful as it should be.

Staten Island Italian Historical Society

DANIEL SANTORO

Since the initiation, in November, 1949, of the Italian Historical Society's program on the discovery by Giovanni da Verrazzano, of New York Bay and the Atlantic Coast of this country, its activities have crowded upon one another. Among the more important events since that date was the essay contest in local history which resulted in a large number of entries. Prizes awarded by the Society amounted to \$65. The Poster contest held at Port Richmond High School also brought many entries. The Society awarded three prizes, of the value of \$7.

Three dinners have been held at the Great Kills Inn, all of which were well attended. At the first dinner Dr. Albert Corey, state

historian, was a guest. Steps have been taken toward a movement to rehabilitate the Garibaldi house at Rosebank. Five hundred copies of a Garibaldi-Meucci illustration to commemorate the hundredth anniversary of Garibaldi's coming to the Island have been published and distributed. Also twenty-five hundred booklets on Verrazzano by Daniel Santoro and a number of bronze medals have been distributed free. Numerous maps, illustrations and other data on Verrazzano have been prepared, and an outline and excellent bibliography has been written by Robert D. Winston, Principal of Public School 46; a play with costumes and music of the period was produced by Mrs. Lillian B. Stamps, Principal of Public School 41, and repeated at the request of Miss Mary M. Blair, Assistant Superintendent of Schools; the Booklet on Verrazzano was re-printed in the Congressional Record of March 16, 1950, through the courtesy of Congressman and Associate Member Hon. James J. Murphy; and a campaign was initiated to have one of the ferry-boats now under construction named the "Verrazzano."

The program for the coming year is already impressive. A dance is to be held at the Boulevard Hotel, June 23. Dr. A. Franzonello and Miss Rose Fiore are co-chairmen. A series of lectures on sculpture, painting and literature is projected, to be illustrated by colored slides. Musical recitals and sound-pictures of Italian subjects also will be given. The 100th anniversary of Garibaldi's coming to the Island will be commemorated by a dinner or a lecture, or both, and efforts are being made to have a postal cachet or cancellation issued in memory of Garibaldi. Mr. Santoro will publish a booklet on Garibaldi in America, for free distribution; also a short history of the invention of the telephone by Antonio Meucci, a short history of Italians on Staten Island from 1680 to the present day, listing the first professional men and women. A list of men and women of Italian origin who served in the armed forces in World War I is in preparation.

On February 7 of this year the Society became an affiliate of the Staten Island Institute of Arts and Sciences. Thanks are due to Mr. Roswell S. Coles, Director, and his staff, for their cooperation in all our programs. Numerous meetings of our officers and trustees have been held at the Museum.

Section of Literature (Belles Lettres Society)

EDITH HOWELL

The Society opened its season September 25, 1949, at the home of Mr. and Mrs. Isidore Delson, 324 Castleton Avenue, with its résumé of the members' summer reading, which included art, history, theology, biography, economics and political philosophy. The

second meeting, October 16, at the home of Dr. and Mrs. Ernest C. McCulloch, 94 Knox Place, was devoted to original work of members. Contributors included Dr. McCulloch, Mrs. Frank Jacobsen, Mrs. William A. Lumsden, Col. Willard M. Grimes and Mabel Abbott. Under the direction of Prof. Robert Cumberland, a play by John J. Carniol, "Faust a l'Américaine" was performed.

At the meeting of November 20, at the home of Dr. and Mrs. Stacey F. Howell, 44 Moody Place, recordings made by members of the Society were played by Mr. Raymond Safford, chairman of the day. The Christmas program was given December 18 at the home of Mr. and Mrs. Walter Kuhn, 58 Pembroke Avenue. Miss Marjorie Sunderman read an article on "The Story Behind the Music and Lights of Christmas." Mrs. Kuhn told of the Chanukah festival, and her young son Billy pronounced the traditional formula both in Hebrew and English, and lighted the candles. Carols were sung by Mrs. Kay Rogers, and by the New Dorp High School chorus under the direction of Mrs. Kuhn. Mrs. Meyer Lindner also sang Chanukah melodies.

On January 15, with Miss Dorothy Smith as hostess, at 1213 Clove Road, guests were Prof. Warren Robinson of Wagner College, who spoke on the Poetry of Art, and Henri Senneur, teacher of sculpture at the Art Museum of Montclair, New Jersey, who discussed the Poetry of Sculpture.

"Oneata," an Island landmark, was the topic of the meeting February 19, held with Col. and Mrs. Willard M. Grimes, 117 Windermere Road. Mr. and Mrs. Leslie Carter gave the history of the old house, once the home of General William G. Ward, and added personal recollections of its more recent history. At the March 19 meeting, at the home of Mr. and Mrs. Lester L. Callan, 35 Ellicott Place, Miss Dorothy Smith outlined her forthcoming biography of Theodosia Burr.

The annual dinner of the Society took place April 29, at the Tavern-on-the-Green. The subject of the evening was "The Water Shortage." Solutions of this problem offered by the members were thought-provoking as well as entertaining. Mrs. Ernest C. McCulloch, in charge of decorations, accented the topic with cactus arrangements. Leonard Sutter and Col. Grimes were co-chairmen.

On May 14, at the home of Mr. and Mrs. Lumsden, 5 Walnut Street, the group heard Mrs. Ralph R. McKee, president of St. Cecilia, as guest speaker. Her subject was the Poetry of Music. Mr. George Martin played three selections.

The year's activities were closed with a picnic in the grounds of Mr. and Mrs. Leonard Sutter, 119 Bloomingdale Road, at which the officers for the coming year were installed, as follows: Raymond Safford, President; Mrs. Lumsden, Vice President; Thomas H. Philips, Treasurer; Mrs. Leonard Sutter, Recording Secretary; Mrs. Hartley L. H. Smith, Corresponding Secretary.

Five new members joined the Society during the year,—Dr. and Mrs. Bengt Hamilton, Mr. and Mrs. Ralph Grimes, and Mrs. Hartley L. H. Smith. And the Society regrets to have to record the deaths of three long and valued members, Mrs. Adolph W. Callisen, Miss Katherine Grey, and Cornelius G. Kolff.

Fortnightly Club

ELEONORE RACH

The prospectus of the season 1949-1950 listed twenty-three regular and two honorary members. One of the former, Mrs. Charles Schaefer of Milton on Hudson, has passed away, and another, Miss R. M. Packer of Stapleton, resigned.

Sixteen regular meetings and two executive meetings took place at the homes of the members of the organization. The programs have been as follows:

1949

October 3—"Lost City of the Incas" by Hiram Bingham, reviewed by Mrs. David Elder.

October 17—"Hawaii," essay based on travelogue, by Mrs. John W. Dreyer.

October 31—"Unesco." Report on the activities of this part of the United Nations by Mrs. C. C. Covert.

November 14—"Lead Kindly Light" by Vincent Sheean, reviewed by Mrs. John A. Swett.

November 28—"A Voyage in the Baltic." Original paper by Mrs. A. S. Richardson.

December 12—"Christmas Program," by Mrs. Thomas Dobson.

1950

January 9—Reading of poems and short stories by members, instead of scheduled topic.

January 23—"The Trapp Family" by Baroness von Trapp, reviewed by Mrs. John P. Dicke.

February 6—"Hawthorne" by Mark Van Doren, reviewed by Mrs. Christopher Steadman.

February 20—"Domestic Manners of the Americans" by Frances Trollope, reviewed by Miss Annie A. Davison.

March 6—"The Nobel Prize Winners in Literature" by Mrs. Eleonore Rach.

March 20—Part Two of the same topic by Mrs. Eleonore Rach.

March 27—"26 Letters" by Oscar Ogg, reviewed by Mrs. Ralph Van Wormer.

April 17—"Mirror for Man," a study in Anthropology, reviewed by Mrs. G. M. Davey.

May 1—"American Glass" by Mrs. R. W. Moller.

May 15—"Musical," Mrs. Tanner pianist, Mrs. Judd violinist, Mr. Rist, baritone. This was the sixteenth and final meeting of the season, the *Biennial* and *Sixtieth Anniversary of the founding of the Club*.

Officers elected for the Season 1950-1951 are as follows:

President: Miss Annie A. Davison

First Vice-President: Mrs. John W. Dreyer

Second Vice-President: Mrs. W. M. Grimes

Treasurer: Mrs. S. J. Botsford

Recording Secretary: Mrs. Christopher Steadman

Corresponding Secretary: Mrs. John P. Dicke

Directors: Mrs. Barrett-Smith, Mrs. R. W. Moller,
Mrs. David Parke, Mrs. J. A. Swett.

The members of the Fortnightly Club will be the guests of Mrs. David Parke at a picnic, to be held at her summer home at Panther Lake, New Jersey, some time in mid-summer.

Staten Island Poetry Society

LUCILE COLEMAN

In March of this year, the Staten Island Poetry Society became an affiliated society of the Staten Island Institute of Arts and Sciences. Mrs. Lucile Coleman, retiring President, and Mrs. Naomi Marcato attended the Institute Council meeting at the Museum May 11.

The Society has met on the first Wednesday of each month in the Local Board Room of Borough Hall. Board meetings have been held at the homes of Mrs. Marcato and Mrs. Coleman, and workroom meetings at the homes of Mrs. Carmela Inglinfa, Dr. E. C. McCulloch and John Devlin.

The Society participated in the first observance of Staten Island Poetry Day, founded in October, 1849, by Lucile Coleman, by proclamation of Borough President Cornelius A. Hall. Contests were held for grade and high schools of the Island, and for Veterans of Halloran Hall, as well as for non-member Island poets. First, second and third awards were given, the awards being sterling silver medals and Anthologies of the Society, "First Music" and "Second Chorus." Mrs. Coleman was editor of both Anthologies. The Borough President was presented on occasion with a certificate of honorary membership in the Society.

Bi-monthly poetry contests have been held for members. A poetry picnic was given, and the Third Annual Dinner, celebrating the founding of the Society by Louis J. Roemer in February, 1947, was held at Kroener's R. & H. Restaurant in February, 1950. About 60 poets from other Boroughs and other States attended,

besides those residing here. The Borough President and Mrs. Hall were guests of honor. A cherry blossom festival was held May 14 at the home of Mrs. Carmela Inglima. At all these festivities members read original poems. Members' poetry was exhibited at the outdoor poetry exhibit held in May in Washington Square, and an exhibition of members' poetry was also rotated throughout Island public libraries.

Election of officers was held in May. Officers for 1950-52 are: Dr. Thyra Josselyn, President; Dr. E. C. McCulloch, Vice-President; Mrs. Naomi Marcato, Corresponding Secretary; Mrs. Yolanda Attienese Lux, Recording Secretary; Frank Cicatello, Treasurer; and Carmela Inglima, Publicity Director.

The Society's emblem is a wreath and a quill, and its colors are green and gold. Meetings are suspended during July and August.

MUSIC

Department of Music

HARRY RUSSELL

Four musical activities were sponsored by the Museum during the season just ended.

A series of fifteen Piano Lecture Recitals, illustrating the "Development of Piano Music in the Nineteenth Century," was given in Public School 42, Eltingville, from September 21 to January 11, on Wednesday afternoons from three-thirty to five o'clock by George Martin, concert pianist and faculty member of Wagner College.

Two series of fifteen Opera Lecture Recitals each, were given on Tuesday evenings from eight to ten o'clock in the Museum, one in the fall and one in the spring. These lectures were given by Marcella Geon, Manhattan pianist and teacher, and were in the nature of informal conversational concerts. Miss Geon was assisted by various soloists singing many of the outstanding arias from each opera.

The Treble Choral Ensemble, directed by Marjorie Sunderman, music teacher at Public School 14, gave its members the means of studying Choral Conducting at its rehearsals each Tuesday evening in the Museum from eight to ten o'clock.

The Staten Island Oratorio Society, conducted by Harry Russell, studied works in the oratorio repertoire and presented several of them in public concerts and broadcasts.

In sponsoring these activities, the Museum was endeavoring to fulfill the two-fold purpose of providing educational opportunities for those desirous of enlarging their musical appreciation and

technique and through its sponsorship of public concerts and broadcasts to aid in the development of the Borough of Richmond as a more musical community.

Staten Island Oratorio Society

LESLIE CARTER

The 1949-50 season of the Oratorio Society opened September 12, at which meeting Frank Gunnell took motion pictures of the Society in action, for inclusion in his fine film on Museum activities.

Through the efforts of the Museum's Public Relations Director, Mrs. Alice Reichenbach, a recording was made on November 7 by Station WNYC of Schubert's "Song of Miriam," and it was broadcast at 5:30 p.m. Thanksgiving Day. Miss Mirte Van Pelt, who sang the part of Miriam in the Society's first performance, last summer, sang it again for the record.

At the Museum's Christmas Concert, the Society gave five selections from Handel's "Messiah."

With the New Year came the realization that something must be done about the Society's finances. It was decided to give a Silver Tea, which took place in the Museum February 26. Our good friend the Staten Island Symphony Society contributed a fine trio of musicians, Mrs. Rosa Judd violin, Mrs. Dorothea Seesselberg cello and Mrs. Sylvia Small piano. The program was highly enjoyable, but attendance was meager.

The performance of "Hora Novissima," at McKee High School, June 2, was extremely successful from the artistic point of view. Soloists were Jeanne Privette, Soprano, Jane Jones, Contralto, Dr. Glenn M. Gordon, Tenor, and Leo J. F. Bartinique, Baritone. Mrs. Sylvia Small was accompanist. Under the direction of Harry Russell, the chorus sang the difficult music with finish and precision. Attendance was fairly good, thus raising the Society's spirits considerably.

The Society has again voted to have school-teachers join it next fall as part of the Institute's Educational program.

At the annual election of officers, June 5, the following were chosen: Mrs. Elsie Cole, President, Mrs. Dorothy [unclear] Vice-President, Mrs. Catherine Gallagher, Secretary, and Ralph [unclear] Treasurer.

It is pleasant to note, in conclusion, the increase in membership during the year. Twenty-eight voices sang in the chorus of the Messiah last season, while thirty-four took part at the performance of Hora Novissima.

Treble Choral Ensemble

MARJORIE L. SUNDERMAN

The Treble Choral Ensemble, a group of twenty women, met on Tuesdays at 8:30 in the Exhibition Room at the Museum from October through May. The group was organized twelve years ago to provide the opportunity for those interested in group singing to study and enjoy performing the best in Choral Music for women's voices. It has also been the aim of the group to aid worthwhile community projects through their activities.

Public appearances this year have included the performances of the group at the annual Christmas program of the Museum. The group also gave a program at the Christmas Tree at the New Dorp Moravian church and assisted in the programs marking the close of the courses offered by the Educational Department at the Museum.

The group is under the direction of Miss Marjorie Sunderman. Mrs. Ray Kacik is the accompanist. Mrs. Howard Shadwell is President.

PRINTS AND PHOTOGRAPHS

Department of Prints and Photographs

DANIEL L. BRIDGMAN

The Museum has had some interesting accessions to its collection of prints and photographs of Island subjects this year and an exhibit of prints has been maintained on the stairway throughout the year.

The Camera Club (Section of Photography) has kept a constantly changing exhibition of the work of its members, including prize-winning pictures, on the walls of the basement.

In addition, several cases of photographs of old Staten Island houses have been on display in the Exhibition Room for the last month.

Section of Photography (Staten Island Camera Club)

ELLIOTT CHAPIN

In the past year, our paid-up membership numbered 56. We hope to attract many more members in the coming year by expanding our program and providing facilities which will be interesting and helpful to the novice, or beginner in photography.

During the past year, the section of photography, as a section, and members individually, have taken part in many projects of

community interest. Important among these are the voluntary photographic services in connection with the Staten Island Tuberculosis Committee's mobile X-Ray unit, and the activities of the Visiting Nurses Association. Several members have taken over the direction of the Camera Club of the Police Athletic League at the Rasmussen P.A.L. Center.

The Section has provided many well known speakers and lectures for its members and guests.

We have done much during the past year to promote interest in Color Slide Photography, and it is gratifying to note that as a result, our monthly color slide competitions have increased in both quality and quantity, and we hope to obtain even greater results next year.

In color slide competitions, the section has climbed to eighth place in the Metropolitan Camera Club Council, against 29 competing clubs in Metropolitan New York.

Considerable photographic lighting equipment has been purchased for members' use at studio sessions.

Plans are now being formulated for our annual Summer Field Trip, dates and places will be announced soon. Our Annual Dinner will be held on Saturday, July 1st, at which time our new officers will be installed and awards given to competition winners.

THE STATEN ISLAND PHILATELIC SOCIETY

THOMAS WATSON

The Society has met every second and fourth Monday of each month excepting July and August. We have had the usual number of speakers of national repute, and some small auctions after each business session. The By-laws Committee presented a good set of by-laws, which were adopted. As these provided that the ex-President and two lay members be on the Board of Governors with the Society's officers, Mr. Elliott R. Burgher and Mr. Henry Kraemer were elected to the board. Six new members have been accepted during the year.

We regret to record that early in October our Recording Secretary, Mr. J. Ott was struck down by polio. Mr. William Hobbs kindly volunteered to take the minutes for the rest of the time.

Six frames were lent to Halloran Hospital twice during the year, for its Stamp Club exhibitions.

A delegation of the Staten Island Italian Historical Society paid us a visit in regard to co-operation in the matter of a postal cancellation or cachet to celebrate the 100th anniversary of the coming of Gen. Garibaldi to reside on the Island. Thomas A. Watson and Silvio Marcovecchio were appointed to act on the project.

Our Christmas party was a huge success, mainly through the efforts of Mr. Hobbs, who had charge of refreshments, and Mr. Kuhn, in charge of entertainment. A gift of \$25 was raised for Mr. Ott.

In March we gave our Annual Exhibition in the Museum, under the chairmanship of Mr. Kraemer. Winners were as follows:

Elliott R. Burgher	U.S.
Alexander Findlay	Foreign
Walter Kuhn	Airmail and Covers
Elliott R. Burgher	Best Page
Marion Pratt	Tropical
Alexander Findlay	Best all-round exhibit.

We re-instituted our annual banquet, which was held at the Riviera Chateau, April 28. Mr. Burgher, toastmaster, presented the Elliott R. Burgher Award to Mr. Findlay for his "Best Exhibit." President Watson presented Certificates of Appreciation to Henry Murray for his work with the Junior Stamp Club, and to Stephen O'Brien and Bernard Lundin for their work with the Halloran Stamp Club. Certificates were also awarded to Mr. Kraemer for his untiring efforts with exhibitions, and to Mr. Burgher for outstanding aid and interest in the Society's doings and exhibitions.

Our publicity has been very good throughout the year. Mr. George Bain has taken over Periodicals Publicity, with exceptional results.

At our annual meeting, May 8, the following officers were elected: President, William Hobbs; Vice-President, Alexander Findlay; Treasurer, William McFarland; Recording Secretary, Frank Given; Corresponding Secretary, Miss Marion Pratt; Members Board of Governors, Henry Kraemer and Elliott R. Burgher.

LITERATURE RELATING TO STATEN ISLAND

"Linda's Homecoming," by Phyllis A. Whitney. A McKay Book.

Another Whitney book has joined the growing row on library shelves. Miss Whitney's juveniles are becoming an annual on publishers' lists, and her youthful audience — or rather, audiences, for she writes for varying age-levels — can depend on them for interesting and sympathetic stories. For her characters Miss Whitney draws on a close personal knowledge of children's and teen-agers' ideas and problems, and her settings are those to which youngsters respond readily. *"Linda's Homecoming"* is the story of a young girl uprooted from her surroundings and the routine of her home life, obliged to make new friends and adjust herself to new ways. To outline the plot would be to spoil the fun

for young readers; but one may assure them that it will turn out right, with something for them to think about, and even a glimpse of a romance ahead. To young members of the Staten Land Museum the story will have an additional interest, because there is a Museum in it!

NEW MEMBERS

JUNE 1, 1950

Mr. Allan B. Anderson	Miss Jean McKinlay
Mrs. Charlotte Benner	John G. Marr
Edward Biggs	Mrs. John A. Matey
James Cavan	Miss Reba J. Miller
Miss Jane Christiansen	Mrs. Nelson K. Mintz
Wesley C. Clark	Mrs. Catherine Muntz
Mr. & Mrs. Frank S. Cooke	Carl Nagel
Mr. John Crawford	Mrs. Aanon A. Olsen
Mr. & Mrs.	Robert Petersen
Mr. K. Szabo Czimbalmos	Mrs. Leonie Prudden
Mrs. L. H. de Leon	Mrs. Dorothy K. Rogers
Miss Christine Eberhardt	Mrs. W. Crosby Roper, Jr.
Donald I. Elkins	Harold Scheminger
Mrs. Elsa F. Ericson	Henry Schwartz
Harry Fromouth	Miss Mildred E. Schulz
Miss Hazel F. Gross	Sherwood B. Seeley
Miss Frances Hankinson	Roland H. Sloan, Jr.
Mr. & Mrs. Vernon B. Hampton	Miss Narell A. Smith
Mrs. Henry W. Howell, Jr.	Paul G. Steck
Mr. & Mrs. Hugh J. Jamieson	Miss Ruth H. Storm
Miss Gertrude Johannsen	Richard R. Tacke
Miss Helen Kosanke	Rev. A. J. Torrey
Frank E. Litke	Van Lear Woodward
William Logie	Mrs. Joseph W. Zomnir

FORM OF BEQUEST

I hereby give, devise and bequeath to the Staten Island
Institute of Arts and Sciences, Staten Island, New York, the
sum of to be
used, (or the income from which to be used) for the work
(or a specific purpose) of the Institute.

Signature

Address

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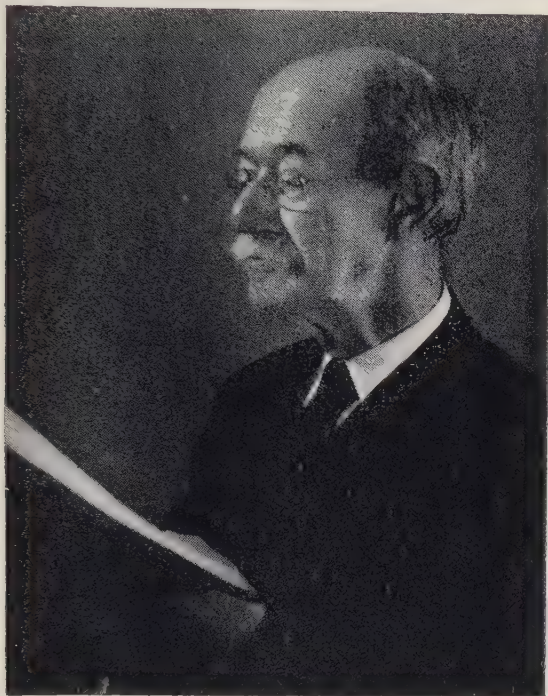
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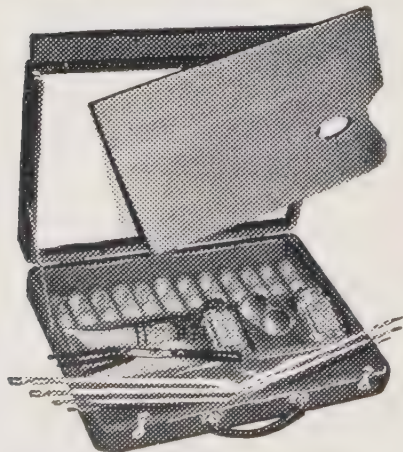
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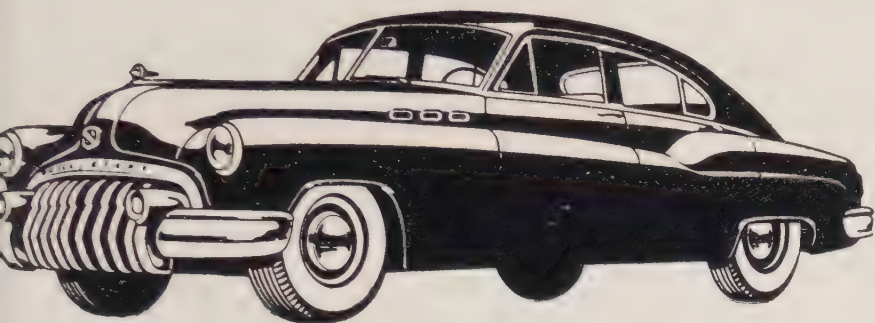
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STATEN ISLAND INSTITUTE
of ARTS and SCIENCES



VOLUME XIII

NUMBER 1

October, 1950



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The new car market is tight. The used car market is mixed. No one can foretell whether or not the necessities of the future will dry up the flow of new cars and cause a drastic reduction in auto agency employees. The situation is fluid and can become critical in both new car purchases and in the servicing of existing models.

We hope these things do not happen but this we do know: no matter what the eventuality, Robbins Reef must continue to do its utmost to assure you efficient and dependable service from the fine Buick that you now own, and, when you need your new Buick, we must lend every effort to see that you get it.

If you are considering a new car will you help us to serve you by placing your order as soon as possible.

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CEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND
 NCES, Vol. 13, No. 1, October, 1950. Published Quarterly in October, January,
 and July, by the Staten Island Institute of Arts and Sciences, 75 Stuyvesant
 e, Staten Island, N. Y., and entered as second class matter at Staten Island, N. Y.,
 r Act of August 24, 1912. Subscription price \$2.00 per year, included in annual
 ership fee of \$3.00. Mabel Abbott, Editor.

The Census Looks at Staten Island

Part I

ROSWELL S. COLES

For nearly seventy years the pages of our *Proceedings* have presented a wonderful array of interesting, authoritative and valuable studies about Staten Island. Some have been about birds, plants, trees, insects, rocks and minerals and other natural history subjects. Some have concerned themselves with the history of the island, important happenings, well known men and women, old buildings. Much has appeared in the nature of annual reports such as our bird census, which over the years form important sources of information for later students.

Along with these studies occur frequent references to changing conditions on Staten Island, largely nostalgic and reflecting the point of view of the naturalist that the "best" Island is the one with the fewest human beings to spoil it. There is a tragic fatalism in these statements, sadness at each new house, at each new street, bowing to the inevitable.

Now if this point of view were the whole truth those of us interested in the Museum and particularly the Nature Section would indeed have cause to be soured on the world and on Staten Island in particular. The preliminary reports of the 1950 census, along with those of 1940 and 1930, open our eyes to an Island dreamed-of a generation ago and one now facing problems so varied and complex that we not only have failed to find solutions but also have failed to recognize the nature of the problems themselves. These problems, unfortunately, are rising in the very places where the Staten Islanders of even our generation remember the forest and the wild honeysuckle.

The purpose of this article is to present a point of view somewhat more hopeful. But to do this it is necessary to call the attention of thoughtful people to the nature of the changes going on in Staten Island, to evaluate trends in terms of our own and our children's lives, and to suggest a more fruitful approach to our problems than either a resigned fatalism or an impotent anger at some economic group, political party, religion or labor union.

I should like to thank Mr. Ralph Di Iorio, director of the 1950 Census on Staten Island for his assistance in preparing this article.

* * *

Staten Island is changing fairly rapidly from a largely rural to a more urban and urban culture. Such a change should bring not only increased physical benefits but mental and spiritual values as well. If things were not so, civilization would have no meaning. Unfortunately, in the past the development of urban areas has generally

been attended by considerable amounts of social disorganization, human misery, slums, delinquency, vice and crime — often excused as “the price of progress.” Our own Island has not been immune. We *should* be ashamed of much that has transpired here in the name of progress.

Today, however, with broader and deeper sociological understandings, and with vastly improved techniques available for community development, such a community as Staten Island can grow purposefully and properly, achieving for all its citizens maximum values in terms of life itself. It is no longer necessary to pay the price of progress in terms of human misery or of unsightly cities.

Without burdening the argument too much it might be pointed out that there was a time in the not too distant past when childhood, too, paid the price of its growth, in diseases, bad educational practices, exploitation in industry. Yet the improvement of the lot of childhood has come about only through vast changes in family and community life involving revolutionary points of view in human rights, laws, financing. Progress has been slow, opposed by employers, politicians, parents, and even the youngsters themselves. Nor have we reached the millenium.

Some sort of the same halting progress is now being made along community lines, in physical planning, in transportation, residences (even multiple dwellings) education, recreation and citizenship. But we can hardly expect solutions to these problems to be simpler or easier than those faced by our growing children. They will probably be more complex, more difficult, more costly and the results more revolutionary. They will involve conflicting points of view, conflicting interests. But the values achieved will far outweigh the costs.

Let us look at a few facts about Staten Island's growth.

I

POPULATION GROWTH

Estimates of the pre-white Indian population of Staten Island vary but it is believed that our 57 square miles of territory supported at best only a few hundred Indians at any one time. These Indians, incidentally, were “freer” than any of us has been since, but the price of that freedom was savagery — poverty, ignorance, disease, violence.

The first permanent settlement in 1661 was made by 19 settlers and for 250 years the Island grew slowly but steadily. An interesting resume of this growth may be found in an appendix to Dr. Henry G. Steinmeyer's new history (reviewed elsewhere in this issue of the *Proceedings*) “*Staten Island, 1524-1898.*”

<i>Date</i>	<i>Population</i>	
1698	727	(including about 10 percent Negro slaves)
1737	1,889	(including 349 Negro slaves)

1771	2,847	(including 594 Negro slaves)
1800	4,564	
1810	5,347	
1860	25,492	
1880	38,950	
1900	67,021	
1920	116,531	
1930	158,346	
1940	174,441	
1950	191,051	(official preliminary figures)

It will help to visualize this growth if we recall that at the time the Declaration of Independence there were fewer residents of the Island than now live in Prince's Bay alone. Our *Proceedings* first appeared at a time when our population was smaller than that of Stapleton and Rosebank today. At the time of Consolidation, 1898, there were one-third as many of us as in 1950. Finally, we have grown as much in the past twenty years as we did during the first 240 years. It would be interesting if we could complete the figures:

<i>Date</i>	<i>Population</i>
1960	(?)
1970	(?)
1980	(?)
2000	(?)
5000	(?)
10000	(?)
100000	(?)

Based on preliminary figures our rate of increase for the past decade was 9.5 percent. The rate for the previous decade was 10.1 percent and the Island had its greatest increase in the 1920's when the rate was 35.1 percent.

If a nine or ten percent increase is to be normal we might well incorporate it without too much trouble. But most of us look back on the 1920 "boom" with some misgivings. Plans are now being studied for a proposed Narrows Bridge, for manufacturing in the Free Port in Stapleton, for industrial and residential expansion. Further, it is likely that as other suburban areas fill up (the rate in Queens, Suffolk and Nassau Counties was 20, 40 and 63 per cent respectively) more and more people will find that jokes about ferry service are funnier than those relating to the Long Island Railroad. Life on Staten Island *can* be better.

One point needs to be made here. It is not growth that matters; it is what we do with it that counts. Our planning for inevitable problems of population growth certainly lags far behind our efforts to achieve such increases. It is this lack of total planning which should cause us concern.

II

POPULATION SHIFT

In the preliminary report of the 1950 census there is another trend noted. For the first time the Second Assembly District shows a larger population and more homes than the First Assembly District. Figures are:

<i>District</i>	<i>Population</i>	<i>Dwellings</i>
1	93,888	25,885
2	97,127	30,318

More important is the fact that there has been an actual decrease in the population along the North Shore, in Mariners Harbor, Chelsea, Travis, Bloomfield. Areas of most rapid growth are New Dorp, Great Kills, Dongan Hills along the South Shore and Castleton Corners and Todt Hill in the central section. The Tottenville area remained unchanged. There is a movement toward our hilltops.

It is a well known fact that declining populations bring serious community problems. If industries replace homes, slums, delinquency, and crime are likely to develop. If the population just moves on there will be decline in land values, taxes, services and stagnation. Although we have developed no sound statistics, social workers are already becoming concerned over both the Mariners Harbor and Stapleton areas, a concern based not upon sociological theory but upon practical day by day contacts.

Growing areas, too, have their problems. They need new sewers, streets, utilities (including water), schools, churches, shopping centers, medical and recreational services. These must be paid for, by taxes, by increased contributions to such agencies as the Community Chest, or by the cost of goods purchased.

Growth is not bad, change is not bad. People are necessary to do the work of the world and of our Island. In the long run the most efficient use of our Island, its people and its resources will determine the quality of our living. But we, on Staten Island, have been too unconcerned with what is happening to our Island. We have had little opportunity to control our own destiny and perhaps have not even cared about it as long as it did not strike too close to us. Each of us should be aware of what is planned for the future of our own neighborhood, in terms of businesses, parks, schools, transportation, parking facilities, fire and police protection, to say nothing of what is planned for the whole Island. What will the tax rate be in 1960 or 1970? Does it matter to us? Indeed it does.

III

NATIONAL ORIGINS, RACE AND RELIGION

Another series of problems is presented by the diversity of background of our citizens. The original white settlers were Dutch since Staten Island was a part of the government of New Amsterdam. The first permanent settlement were French and

etch from the Palatinate, with perhaps other national groups presented. The British captured New Amsterdam in 1664 and 1739 "the French were becoming less influential and the Dutch little more prominent than the English," the official list of that year showing 13, 24 and 29 persons of French, English and Dutch backgrounds. By 1771 there were 594 Negro slaves and the 3,000idents during the American Revolution saw an aggregate of ut 30,000 British troops quartered here. By 1790 the people of Island continued to be mainly the descendants of those families pre-Revolutionary times.

After 1800 there was a considerable change in the national origins of our people. Several small factories grew up, some of these being the Hall Gun Factory, 1833; N. Y. India Rubber Co., 1835; S. I. Whaling Co., 1838; Jewett White Lead Co., 1842. By that year the English social atmosphere on the Island was so well established that it was easy to "hearten" English emigrants to start a colony of cloth printers here.

Large numbers of Germans and Irish began to come during the mid-century, and others, particularly the Italians, Scandinavians and Poles, about the turn of the century. It is of interest to note that the 1940 census lists 35,121 foreign born whites on Staten Island, coming from 43 places. In 1940 persons born in Italy constituted 30.7 percent of the foreign born; Germans 11.8 percent and others considerably less.

In terms of race, the 1940 figures show that of the 174,441 population there were 170,875 whites and 3,397 Negroes, with "others." In 1930 there were 155,606 whites, 2,576 Negroes and 164 "others." Percentages are:

1940	Whites	98.	Negroes	1.9	Others	.1
1930	Whites	98.3	Negroes	1.6	Others	.1

No information on religious affiliations was given in the 1940 census. Estimates have been made by the Greater New York Fund in a pamphlet, *Our Welfare Needs*, and according to this report 90 percent of our population is Catholic, three percent is Jewish. Figures for the 1950 census are not available. Presumably we will have both fewer numbers and fewer percentages of those of foreign birth but it seems likely that in other respects we shall have a more cosmopolitan grouping than at present. We need to recall that the strength of America is due in a large part to our heterogeneous population. Yet a good deal needs to be done to recognize these values and to create a true community of interest among our people here on Staten Island. Somehow we must mesh these recognized values with that of a deep rooted desire of each of us to stagnate among his own kind.

Fortunately contemporary studies indicate that apparent racial and national differences are due not to inborn inherited traits, but rather to correctible cultural deficiencies. To achieve a Staten Island in which each of us is able to and does contribute his own part to the common good is a tremendous community program, and one which needs the support of each of us.

IV

AGE TRENDS

A comparison between the 1940 and 1930 censuses shows that in 1940 there were not only fewer youngsters from "under five" to 14 years of age but there was also a drop in percentage. On the other hand, the middle and later years show corresponding increases both in numbers and percentages. "Darling, I am growing older," is true not only for each of us as an individual, but also for Staten Island as a whole.

It is likely that the 1950 figures will show an increase in the numbers of youngsters because of war and post-war births. It is also likely that the problems of old age will become increasingly important as we move from decade to decade. Here are the figures for those of us 50 years or over :

<i>Age</i>	1940		1930	
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>
50-54 years	10,211	5.9	8,013	5.1
55 to 59 years	8,074	4.6	5,975	3.8
60 to 64 years	6,489	3.7	4,673	3.0
65 to 69 years	4,832	2.8	3,536	2.2
70 to 74 years	3,355	1.9	2,398	1.5
75 years and over	3,371	1.9	2,224	1.4
	<u>36,332</u>	<u>20.8</u>	<u>26,819</u>	<u>17.0</u>

The problems facing an extended old age are, in one sense, the most revolutionary of those with which we shall have to deal. America was made by young people with the enthusiasm and vigor of youth. As we get older we get more conservative, more tired, more wanting to "live in a roadhouse by the side of a man and be friendly" as one comedian put it. But on the other hand we must be prepared to take care of our old age, our own and our community's. Old age pensions or insurance, homes for the aged, more hospital care, doctors, nurses, special diets, special educational and recreational facilities. In the "good old days" grandparents might look forward to a happy, if short, old age, perhaps working along with the family group and perhaps being supported by their sons and grandsons during the few unproductive years. Today, however, compulsory retirement comes sooner and applies to more and more of us. Old age even dying itself is extended by costly medical services, homes are smaller, no longer affording a place for grandparents, one's children are scattered all over the country, if not the world. Women, in general, live longer than men and must make business as well as emotional adjustments in the aging process.

Whatever may be the methods of filling the needs of older people on Staten Island it is almost certain that the burden will fall primarily not on the family, as in other years, but on the community itself, on tax supported and voluntary services.—again, on you and me.

Part II will consider some educational, economic and political changes.

Fall Exhibition

BY ELY MAXIM BEHAR

Twice a year, the Section of Art of our Museum holds an exhibition of the works of its members. The local artists are given an opportunity to show their work to the hundreds of visitors who are interested in creative work.

The fall exhibition began with a reception on Sunday, October 5 and continued until November 15.

The pictures speak for themselves on behalf of their creators and, as the standard of excellence is so high, it seems superfluous to single out any for praise. The main thing is that they are the works of our own local artists and I do believe that the appreciation of the patrons should be made tangible by the purchase of the pictures which they admire.

When an artist paints a picture, he gives permanence to beauty as he sees it. Most of the artists are present at the opening receptions. They are glad to explain their work to any interested collectors and lovers. Such contacts between the artists and the public would make a visit to our shows even more interesting than they are. The artists thrive on the interest and appreciation of the public. Most of the work shown portrays nature in its cheerful aspect. The beauty expressed is simply stated and obvious. There is little of the boring riddle of what is known as non-objective art. Our beautiful Island doesn't foster the macabre or the morbid.

With all the world at sixes and sevens, it is refreshing to visit these exhibitions where the thought is of beauty.

The list of pictures and exhibitors follows:

Albert Barbelle, "Birch Trees," "Peacock Dance"; Henrietta Beaumont, "The Basin — Great Kills, S. I.," "Surf and Rocks Cape Ann, Mass."; Ely Behar, "Boats — Great Kills"; Marcus Blom, "Dairy Farm," "Summer in Vermont"; Harry Bourne, "Shacks — South Beach Creek," "Quiet Valley"; Janet L. Bruns, "Still Life"; F. A. Busing, "Frog Sanctuary," "Autumnal Placement."

Lawrence Cianchetta, "Sleepy Head"; Kalmás Sz. Czimbalmos, "Axel, Dog Portrait," "Flowers Phantasy"; Magdalena Czimbalmos, "Italian Girl," "Child Portrait of Dorothy"; Dudley Dale, "My Namesake," "Copper Marigolds."

Marguerite DiCrocco, "Saint Fiacre, Patron of Gardeners." Ethel Easley, "Portrait — Robert," "Hydrangea Blossoms"; Patricia M. Eckersley, "Diane."



"BIRCH TREES"

Oil Painting by Albert Barbelle
shown at Annual Exhibition of Members' Work.

Fernand O. Fingado, "Old Brick Work Ruins — Greenridge"; Helen Friedman, "Willows in the Rain," "Sunshine and Shadow."

Lola Landry Gerow, "Three Sisters, at Gaspé," "Delphinium and Roses"; Lillian Williamson Gilfillan, "Midnight Cactus," "Kate Lynch"; Hans Glinicke, "In My Room," "Shoe Shine."

Jean Leason Hitch, "Portrait of My Husband"; Robert A. Hitch, "Westport Farm," "Summer Bouquet"; Mary T. Howe, "Country Graveyard," "Red Barn."

Ernest St. Clair Jeans, "Valencia Avenue"; William L. Johnston, "John's Store — Peekskill, N. Y.," "Christmas Stockings"; Stanley Jorgensen, "Last Port," "Ripe Oats."

Valeria Korniloff, "Colored Model"; Marjorie Kuhfahl, "Still Life."

Isabel Leason, "Lawrence's 'Pinkie'," "Gladioli"; Percy Leason, "Nancy and Her Baby," "Miss Marguerite Di Crocco"; Edward L. Love, "Iris."

Eleanor Marshall, "Phlox in Blue Vase"; Jean Massengale, "Flora Anonima"; Robert F. Mathewson, "High Point"; Alfred McNamara, "Empty House"; Bruce Moore, "Approaching Storm at Pemaquid," "Dreams of Adventure"; Thomas F. Morris, "Portrait of Betty Dryer," "Portrait."

Elizabeth F. Nugent, "Hydrangeas," "Sandy's Boat"; Joseph F. Nugent, "Lemon Creek," "Westport Station."

Laura Orrico, "Adirondack Mountain Vista," "A Cove."

Philip Politico, "Self Portrait."

Margaret K. Rue, "Britton Cottage," "Bonnie Braes, Va."

Elizabeth L. Sherman, "Nasturtiums," "Boutwell Homestead — Holland, Mass."; Seymour Sherman, "Old Indian," "A Portrait"; Isabel Grinnell Simons, "Russet Mums"; Violet Siemering, "The Short Cut — Richmond"; F. Dorothy Steinert, "Rangeley Lakes, Maine"; Eleanor Sutter, "Christmas Flower," "Lily."

Ester Dahl Tellefsen, "Landscape"; Mary C. Triano, "Baby's Head."

Marie Vlassenko, "Moravian Cemetery Bridge," "Moravian Cemetery Brook."

Hattie S. Waldo, "Lake Clear—Adirondacks," "From the porch"; Frederic Whitaker, "Upstate Bridge," "Street in Taxaca"; Thea Wilbur, "Mr. Arthur Pitoker"; Paul Wilke, "Smart View, Va.," "Goshen Pass, W. Va."

One Block on St. Mark's Place

MABEL ABBOTT

The following notes relate to one short block and a few short years. The block is the one on St. Mark's Place between Hyatt and Wall Streets on the east side and between Fort Place and Wall on the west; and the years are the dim ones before and after the turn of the century. It was a pretty and fashionable section, with the atmosphere of mingled simplicity and distinction that made the northern end of Staten Island a favored spot for the homes of well-to-do New Yorkers for several generations. No Revolutionary battles were fought there, and no President was born in any of its homes. It probably offers no more of interest or value to history than many another block on Staten Island, — but also, it offers no less. History consists of many things besides battles and national figures. The normal flow of life is history too, though it usually goes unrecognized as such until too late to record it at first hand.

These fragmentary notes have been gathered for the most part from the recollections of those who knew "Brighton Heights" in their childhood, or who have been told about the place, the period and the people by their parents. They are necessarily incomplete and disconnected, and in too many cases initials or first names and exact dates are lacking; but it is hoped they are not too inaccurate. The reason this survey happened to focus on this particular block was that in the latter half of last century and the first quarter of this one, there stood on the corner of Hyatt Street and the present St. Mark's Place a residence which played a part in the beginnings of this Institute and consequently was mentioned in many of its early publications; and every time they were referred to, it was a reminder of how little (aside from that one fact) is now known about it, and about its neighbors, in their prime. The survey was limited to one block because, as will be seen, one block was plenty for the present. Other blocks can perhaps be studied later.

All this part of the Island was the "Plantation" of Col. Francis Lovelace, who was Governor of the Province of New York in 1688. Part of the plantation was inherited by Ellis Duxbury, who presented it to the Church of St. Andrew, and it became known as the Duxbury Glebe. As settlement increased, the Glebe passed piecemeal into many hands, and presently the villages of Tompkinsville and New Brighton emerged as definite localities, though with boundaries overlapping, so that residents on either side of Hyatt Street gave sometimes one address and sometimes the other. By the eighties the name "St. George" had been tacked on to the nose of the Island and had spread inland for a short but indeterminate distance, so that a third address became possible and was often

1. Furthermore, the hill became known as Brighton Heights; to cap the confusion, St. Mark's Place was Tompkins Avenue about the turn of the century, and for a good while residents were not particularly consistent about which name they used. At any rate, it was a pleasant street. The Brighton Heights Reformed Church building, dedicated in 1864, rose in dignity across Fort Place from one end of our block. At the other Wall Street, then hardly more than a lane, ran down the hill. Lawns were bordered by picket fences or stone walls; the walks were shaded by trees and lighted at night by large glass urns atop lamp-posts. There was no Richmond Terrace during the earlier part of the period; Stuyvesant Place was the continuation of the Shore Road, and its roofs interfered little with the panorama of the Bay enjoyed by dwellers on "the Heights." The house on the corner of Tompkins Avenue and Hyatt Street built by Robert Buchanan, but no more exact date is available present than "before 1853." It fronted on Tompkins Avenue, a squarish two-story structure with a latticed porch across the street, and stood exactly where the parking lot of the St. George Hotel now is. The land ran down to Stuyvesant Place. In 1854 the place was bought by John C. Thompson, a native Staten Islander, active in business and politics. In this house he lived, with his wife, two daughters, Miss Cornelia Thompson and Mrs. George B. Davis Jr., and two grandchildren, Willie and Bessie, until his death in 1872, and the family remained in it until 1881. In 1881 the house was remodeled, remaining still square two-storied, with wide, flat eaves, and painted either white or brown — memories differ on that point.

In 1891 Miss Cornelia died, and in 1892 Mrs. Thompson also died away. In 1893 Mrs. Davis sold the house, and with her two children moved down to 146 Stuyvesant Place, a house which also belonged to the family. The Thompson house was purchased by Erick Tiedemann, an importer with offices in New York. The Tiedemanns, with their four sons and two daughters, had been living in the brick house across the street, on the corner of Tompkins Avenue and Fort Place. Mr. Tiedemann pulled down most of the Thompson house and remodeled what was left so radically that it was unrecognizable.

But how long the Tiedemanns lived there is not certain, but old stories show that they were there in 1897.

The next occupant would seem to have been Richard Agar, whose son, Richard Agar Jr., was killed in World War I, years after they had left the house. Following them was Francois Dese, with his family of three boys and three girls. The house was sold in the nineteen-twenties, and demolished.

The nearest house to the Thompsons on the north was a three-story frame dwelling, with iron balconies. Who built it and when, has not yet been ascertained. It was occupied at one time, we are told, by a family by the name of Wotherspoon. New York City histories show that George Wotherspoon, a broker, lived "at

New Brighton" in 1850 or 1851; and local histories record that George Wotherspoon, "an early resident of the section now called St. George," was "a vestryman of Christ Church, New Brighton," and also that he kept weather records for several years — presumably for his own amusement. Neighbors say that a daughter of the family, born on the Island, married an Englishman who became Governor of Bermuda; but British records show that Leila, daughter of James Wotherspoon of New York, married in 1901 Sir Joseph John Asser, who was Adjutant of the Egyptian Army 1907-14, in charge of the British Army's Line of Communications Area in France during a critical time in the first World War, Governor of Bermuda 1922-27, et. etc. This distinguished connection lends glamor to the story of our block, but awaits further evidence that Lady Asser was born on the Island, that her father, James, was related to George Wotherspoon, and that George Wotherspoon did live next door to the Thompson house.

After the Wotherspoons — just how soon after we do not know, the house was owned by Horace Robert Kelly, a New York merchant, who lived at various addresses on the Island at different times. He was the son of Robert Kelly and Evelina de la Forest Kelly, who lived for a long time at the famous old Pavilion Hotel. Mrs. Robert Kelly's father was Consul-General of France in New York in the 1840s, and he also lived at the Pavilion. It was Robert Kelly to whom Jeremiah O'Donovan-Rossa, the Irish refugee, turned for help when he came to America, and Rossa mentions him and his son, Horace Robert, in his "Recollections." In just what years Horace Robert Kelly lived in the iron-balconied house is not clear. He was listed as President of the Staten Island Rowing Club in 1886, but he might not have been at that address in that year. However, it seems probable that he was there in the late seventies or early eighties.

The Kellys had several children, one of whom, Robert de la Forest Kelly, lived on the Island for many years, though in business in New York. To his widow, Mrs. Jessie M. Kelly of Rossville, and to his sister, Mrs. Thomas D. Toy of Manhattan, we are indebted for most of the above facts.

Soon after the Kellys moved away, the house was acquired by the Brighton Heights Seminary Association for a school for children and young girls. According to the recollection of Victor McQuade, who as a boy lived next door, Eckstein Norton was President of that Association, Victor's father, Peter McQuade, was Treasurer, and other members were Erastus Wiman, Charles E. Zentgraf of Stapleton, H. E. Alexander, who lived on Clinton Avenue, near by, and Captain King of Arrochar. After the first year the Association built another frame building on the property, close to the Thompson lot-line, for use as a school building. During summer, when school was out, the whole property was operated as a boarding house. The dwelling itself was damaged by a fire and was presently pulled down, but the school building was not damaged, and after it ceased to be used by the Seminary it was

occupied by a succession of tenants, including at one time a gymnasium and health school. Finally, the entire property was purchased by Mr. Martin Keppler, who changed the school into a residence building and later built three other residences there for his three daughters, Cecilia, who married William H. Morris, Amelia, who married Charles Fannon, and Ethel, who married Edward Clark. These are still standing.

Next door to the Kellys, as has been said, were the Peter McQuades. Their house, as pictured in an old book, was three stories high, the third story being a mansard. There was a tower in the middle of the front, and porches both front and back. Mr. McQuade bought the property about 1878 from Erastus Wiman and built the house about 1879 or 1880. The family lived there for more than forty years. It was sold about 1925 and has been demolished. Mr. Victor McQuade has been extremely helpful in supplying these and many other facts concerning the neighborhood. Erastus Wiman, from whom Peter McQuade bought his property, owned a considerable part of the block, his property extending down to Stuyvesant Place. Wiman, a promoter of large enterprises, among which was the unification of the Island's transit at

George, lived for a time in a house at the corner of Tompkins Avenue and Wall Street. It stood well back on its lot, and consequently lower than Tompkins Avenue, so the front door was reached by descending a steep path or steps. In 1880 or thereabouts, Wiman built, next to the McQuade house, what was at that time by far the most elaborate home in that part of the Island, and named it "Tentallion." The house was a show-place, and there were large stables, beautiful gardens and a greenhouse. The smaller house in which he had lived was occupied for a time by George Whitehouse, a broker, and his family. They were there at least in 1882-3. Later other families lived there, and finally it was moved further down the hill, where it still stands and is now known as The Greycourt.

Mr. Wiman's career has been fully recorded in local histories. While living on Tompkins Avenue he met with serious financial difficulties, and the great house was given up, though after his affairs had been cleared up he returned to the Island for a while. The house was occupied by various tenants, and about 1903 or 1904, according to the recollection of neighbors, it was taken by the Staten Island Club, and a second period of importance began for it. This was the leading men's club on the Island. It was organized in 1894, and its first three Presidents, John S. Davenport, John M. Carrere and James G. Timolat were all men who at one time or another lived in this block. The stables were moved from the rear of the property, attached to the north side of the building and made into an assembly room, billiard room and bowling alleys. Many brilliant social functions were held there, as well as many important political ones. Its annual Christmas dinner was a dazzling affair; there was a "clergymen's dinner" which every clergyman on the Island was invited and seated

between two members; there were "Ladies' Nights," dances and other events. For a time Victor McQuade drove a four-in-hand every Sunday morning to take members to the Richmond County Country Club to play golf.

After the Staten Island Club ceased to exist, the great house went through sundry further changes of occupancy, including services for soldiers in World War II. It is now owned by the Elks.

At just what period the corner of the property on St. Mark's Place and Wall Street stood vacant long enough to be a playground for the neighborhood children, is not clear, but Mrs. Medad Stone remembers playing there. It is also said that Francis X. Bushman and Beverly Bayne, stars of the early movies, took a picture there, which showed the Greycourt in the background, down the hill. When the Island's first real apartment house was built on the corner, it was named the Beverly, and local tradition believes the name to be in honor of the actress.

Now we may retrace our steps, giving our attention to the upper or west side of the street. The corner just across from the Wiman property was occupied by the ample grounds and fine home of Eckstein Norton, — known to everybody as "Ex" Norton — a New York banker and at one time President of the Louisville and Nashville Railroad. The stone house rose three stories, with a central tower and a deep veranda. The family like so many others in the block, was a large one; three daughters and three sons. The youngest son, Fred, was killed while driving an ambulance in France in World War I.

When the Nortons left the house it was occupied by a family by the name of Van Bernouth, then stood vacant for a time, and finally was torn down to make way for the huge mass of the McKee Vocational High School which now stands there and to whose principal, Moses Sorola, we are indebted for an old print of the Norton home.

Next to the Norton place on the south were two attractive frame houses (now Nos. 296 and 298), which were built by Daniel Low for his daughters, Mrs. E. C. Bridgman and Miss Adele Low. It has not yet been possible to learn with certainty the names of all the families who succeeded each other in these two houses. Several persons remember that a Miss Eliza Theler (pronounced Taylor) operated one of them as a boarding house for a time. No. 296 is said to have been occupied by Rev. William Walton Clark, his wife and two daughters. If this is correct, the period of his tenancy would seem likely to have been at some time during his pastorate at the Reformed Church on Fort Place, — 1880-1887. Probably not long after this, Miss Eleanor R. Tilden, niece of Daniel Low, was there. Grosvenor Wright and his family also lived at one of the two houses for some years. Another name connected with No. 296 is that of Albert Johnson, of the S. S. White Dental Works.

As to the house at No. 298, there is a conflict of testimony concerning some of the occupants, and their names must await further information.

The house on the corner of Fort Place and St. Mark's Place, now the Meurot Club, is unquestionably the oldest now standing in the block. The first definite information we have is that it was occupied by various New York families as a summer home. The earliest such occupant whose name we can be sure of is Stewart Brown, who lived there for several summers. His grandson, I. Cleaver Brown, thinks this may have been about the fifties. Somewhat later we find the name of Miller. Perhaps not very long thereafter came the Tiedemanns, mentioned before, who lived there until Mr. Tiedemann purchased the Thompson place. Again, it could not have been long after that, that the house on the corner was owned by John M. Carrère, of the famous New York firm of architects, Carrère and Hastings. The directory of 1897 shows him there in that year. Schoolmates of his two daughters remember well that the family was there for several years. Following the Carrères was James G. Timolat, with his wife, his daughter Alma (now Mrs. R. C. Stanley) and two sons. They lived in the house for four years, which included the years 1905 and 1906, according to Mrs. Stanley.

Between the Timolats and the present occupant, the house had tenants whose names have not been secured. It was the home of the Staten Island Masonic Club for a time, before being taken over by the Meurot Club. The building has been greatly added to and altered, but the original part is still a sturdy, elegant old structure.

The block was decorous, of course, as befitted its social standing; but there was always a great deal going on. For one thing, there were many children and young people. In the Thompson house, Willie Davis, a quiet youth with a passion for natural history, had a constant succession of visitors of like tastes, and in 1881, he, Nathaniel L. Britton (later for many years Director of the Bronx Botanical Garden), Arthur Hollick and several others met in that house and organized the Natural Science Association of Staten Island. The story of that group and its successors down to the present time has often been written.

One of Victor McQuade's earliest memories is of being sent by his older sister to slip a Valentine under the door of the Thompson home for her friend Bessie Davis. Victor was an ardent horseman and his friends say he owned some prizewinning jumpers.

The Kellys had a goat and the Nortons had a pony, and the youngsters held "bull fights" which probably were not as bad as they sound. Also, with the Alexander children from Clinton Avenue, they formed the Monday Thumping Club, whose sole purpose was to make a great deal of noise on Mrs. Kelly's day at home, to which for some reason they objected. The Brighton Heights Seminary, during its existence, daily brought a bus-load of girls to the school and daily took them away again.

Carriages came and went in numbers which, somehow, in that less feverish period, never became a traffic jam. But when, about 1900, there was talk of running a trolley line along the street, the inhabitants rose almost unanimously to oppose it, and it was given up.

For some years there was a pretty custom of holding a carriage and equestrian parade from the old Castleton Hotel, farther along the street, to the Richmond County Country Club, which was then in Clove Road. This parade, the carriages decorated with flowers and the occupants in their best, always went along St. Mark's Place, and was one of the year's shows. Sometimes on Christmas Eve Ralph McKee, who lived on Central Avenue, would get together a group to sing carols along the street, stopping at various houses. But probably the most astonishing phenomenon was when a herd of elephants was marched daily from stables in Jersey Street along the avenue before turning down to the St. George flats to take part in the spectacle "The Fall of Rome" in Wiman's great amusement park.

Today St. Mark's Place is congested with less picturesque traffic; the once fine homes are mostly gone and those which remain are not old enough to be quaint and too old to be modern. But it had its day; and that day should not be entirely forgotten.

Breeding Bird Survey, Staten Island, Spring, 1950

HOWARD H. CLEAVES and MATHILDE WEINGARTNER

The breeding Bird Census was again conducted over a period of several months, so that early as well as late breeding birds would be included in the count. Most of the records were turned in by Howard H. Cleaves, as he spent more time on Staten Island during the spring and early summer months. Also taking part in the census were: Casimir Redjives, Lee A. Ellison and Miss Mathilde P. Weingartner. The total number of species found to be breeding were 58. There are 24 more species to be seen at breeding time but neither the nests nor the downy young were seen to be recorded in a true breeding census.

Pied-billed Grebe	Once again, as in several seasons past, this species bred at Claypit Ponds in Rossville, where Cleaves observed an adult with two young and also found the nest.
Green Heron	Seen in numerous localities although no nests were found.
Black-crowned Night Heron	Numerous birds were seen, but there is no proof that these birds breed here.
Yellow-crowned Night Heron	Cleaves and Redjives observed an adult bird but there is no evidence that this bird breeds on S. I.
Least Bittern	Seen by Redjives and Cleaves at Claypit Ponds and no doubt breeds there.
Mallard Duck	Seen by Ellison at the Edison Plant in Travis, adult with several young.
Black Duck	Nest with nine eggs found by Cleaves in Marine Park. However the following day these eggs were found broken around the nest. Identity of the marauder unknown.
Wood Duck	Cleaves observed a female Wood Duck with at least six ducklings in Wolfe's Pond Park Area and he and Ellison flushed three pairs from a pond nearby in June.
Red-shouldered Hawk	Lee Ellison discovered the nest in a woodland near South Ave. in late May. This is a noteworthy record as this species had not been recorded as a breeding species for a number of years.

Marsh Hawk	Observed in several localities but no evidence of a nest has been found since 1916.
Sparrow Hawk	Present in many parts of the Island and no doubt a regular breeder every year.
Osprey	Seen flying overhead but no evidence of breeding.
Pheasant	Not as abundant as in some years but still breeding on Staten Island.
Piping Plover	Cleaves found nest with four eggs in Marine Park area.
Killdeer	Nest with three eggs found at Crooke's Point by Cleaves and birds also bred in Sailor's Snug Harbor corn field.
Woodcock	Courting antics reported from several localities and birds seen still in these localities later in the year.
Spotted Sandpiper	Observed in breeding season at Marine Park by Cleaves. Seems to breed here but in extremely limited numbers.
Least Tern	Adult birds seen feeding minnows to immature birds at Ward's Point, but no nests were discovered at Crooke's Point as in former years.
Mourning Doves	A numerous breeder in many parts of the island.
Yellow-billed Cuckoo	Heard at intervals in Pleasant Plains all summer and no doubt breeding there.
Black-billed Cuckoo	Breeds here as abundantly as the former species.
Barn Owl	It was reported to Cleaves that young had been discovered in a recess of the steel structure of Goethals Bridge, men engaged in painting the bridge. One young owl is reported to have fallen into the water below the bridge.
Screech Owl	Three young were taken from nest cavity in tree at Richmond Valley and presented to the Zoo. Adults accompanied three young were observed by Cleaves on Rockland Avenue near Richmond Avenue. A young bird was seen on Kissel Avenue, where adults had been observed for several years.

Long-eared Owl	Redjives discovered a group of these owls in a thick stand of timber near Bay Terrace railroad station in late winter. In May Cleaves and Redjives observed three of these owls at the same site. Cleaves and Wilmot saw one there in June. It is possible that the owls bred nearby.
Short-eared Owl	Redjives and others observed several of this species in Marine Park during winter and spring, and one was observed in flight in June. It is just barely possible that these birds bred on Staten Island.
Whip-poor-will	Breeding in various parts of the Island.
Chimney Swift	Present and no doubt breeding in Pleasant Plains, along Rockland Avenue and elsewhere on the Island.
Hummingbird	Bird seen but nest not found as it is very concealed.
Kingfisher	It is likely that this species has re-established itself as a nester somewhere along the Princes Bay waterfront. Seen all summer in the neighborhood of Kissel Avenue.
Flicker	Found nesting in Kissel Avenue Woods.
Downy Woodpecker	Breeds in various parts of the Island.
Kingbirds	A flock of five, some immature were seen catching and eating bees in front of the bee-hives at 17 Amelia Court.
Crested Flycatcher	Breeds in hollow trees and bird boxes in various parts of the island.
Phoebe	Nest with young found by Cleaves under Lemon Creek Bridge.
Alder Flycatcher	Heard and seen the last day of May near Travis Avenue. However it is doubtful that this bird breeds here.
Wood Pewee	Heard and seen near South Avenue. Probably breeds there.
Prairie Horned Lark	Cleaves found nest with three young in Marine Park area.
Tree Swallow	Found breeding by Cleaves for the first known time on S. I. at Lemon Creek, in a house intended for Martins.
Rough-winged Swallow	Two pairs nested in drain pipes under Lemon Creek Bridge.

Barn Swallows	Cleaves saw nest with four or five young at Lemon Creek. They also nested in the barns of Sailor's Snug Harbor.
Blue Jay	Cleaves saw a nest containing five young in Pleasant Plains. They also nested in the Kissel Avenue area.
American Crow	An annual breeder on the island but not numerous.
Fish Crow	No record of its breeding here though the birds can be seen in moderate numbers throughout the year.
Black-capped Chicadee	These birds were found in various places on the Island throughout the spring and summer and no doubt breed here.
White-breasted Nuthatch	Heard at frequent intervals at Pleasant Plains and no doubt breeds there as well as in other areas.
House Wren	Breeds commonly in nesting boxes all over the Island.
Carolina Wren	Two occurrence records: Tottenville by Redjives and St. Marks Place by H. Cleaver Brown. These Carolina Wrens were probably wanderers but their occurrence on the Island at all is a rarity.
Long-billed Marsh Wren	Still nesting in various areas of the Island.
Catbird	One of our most abundant summer residents and nesters.
Brown Thrasher	Also nests abundantly.
Robin	One of the Island's most widely distributed, numerous and best-liked birds.
Wood Thrush	Breeds in wooded sections in various parts of the Island.
Veery	Cleaves reports two singing males near Mt. St. Michael, Wilmot heard two singing males in Pleasant Plains and a pair of birds were seen by Ellison near South Avenue.
Bluebird	Nests sparingly in boxes and hollow trees in several parts of the Island.
Starling	A common Island-wide nester.
White-eyed Vireo	Cleaves saw a male near Sandy Brook, and Ellison heard one call in June near Valhalla Cemetery.

Red-eyed Vireo	This bird continues to be a common nester in our wooded areas.
Yellow Warbler	Heard singing in June near South Avenue, Travis Avenue, and Clay-pit Ponds area. No doubt nests there.
Prairie Warbler	Present and doubtless nesting near McGuire Avenue and Drumgoole Boulevard.
Ovenbird	Heard singing and seen in various parts of the Island all summer and no doubt breeds there.
Yellowthroat	Nest and young seen near Kissel Avenue.
Yellow-breasted Chat	One singing male heard near McGuire Ave. No nests found this year but some of their favorite haunts were not covered on the census this year.
Redstart	Cleaves observed a Redstart in woodland near South Avenue and Lambert's Lane in early June. The species may nest.
English Sparrow	The species is common and breeds generally all over Staten Island.
Meadowlark	Bred in meadows of Mt. Loretto and Mt. St. Michaels.
Red-winged Blackbird	Bred at Mt. Loretto, Marine Park, Huguenot Park, etc.
Orchard Oriole	Cleaves observed a male near south end of Wolfe's Pond park in June. Wilmoth reported two males in his neighborhood in Princes Bay.
Baltimore Oriole	Widely distributed over the Island as a summer resident and breeder in 1950.
Purple Grackle	Preferring evergreen trees for nesting sites, this species nests in many communities of Staten Island.
Cowbird	Widely distributed over the Island as no doubt many a Song Sparrow and Yellow Warbler could testify.
Scarlet Tanager	The species breeds in a number of localities on Staten Island.
Cardinal	Cardinals live in almost all parts of Staten Island, are permanent residents and abundant breeders.
Indigo Bunting	Singing males heard in June in Moravian Cemetery.

Rose-breasted Grosbeak	One male bird heard singing in Kirchofer's nursery in June, but as the season was rather late this bird probably did not breed there.
Goldfinch	This bird is present on Staten Island in widely scattered areas and breeds here though nests are seldom located.
Towhee	Common breeders on Staten Island.
Grasshopper Sparrow	Still persists behind the Tavern on the Green, where it has been seen for many years.
Seaside Sparrow	Cleaves observed a few individuals in Marine Park in May, and one bird in the Rossville area in July. Probably still breed here.
Chipping Sparrow	Well represented in Moravian Cemetery.
Field Sparrow	Seen in numerous open field and nest found near South Avenue.
Swamp Sparrow	Found in numerous marshy areas.
Song Sparrow	Breed in all parts of the Island where they can find attractive cover.

Literature Relating to Staten Island

"Staten Island 1524- -1898" by Henry G. Steinmeyer. Published by The Staten Island Historical Society, Richmond-town, Staten Island.

"This book," writes Loring McMillen, Borough Historian, in his Foreword, "is the result of a widespread desire for a concise, popularly written history adapted to the means and the reading time of everyone." Not always does the need for a book find so clean-cut and satisfying a response. This comfortably-sized, handsomely printed volume will give many a reader a view of the Island's past which he never would have taken the trouble to gain from fuller sources. Our standard histories, bulging with the local details that constitute much of their value to researchers, have been trimmed down by Dr. Steinmeyer to the essentials, and then pleasantly streamlined by an agreeable style and a mild humor. The result cannot fail to be both popular and educative. In addition to the narrative, the author has provided a wealth of photographs of the Island's old homes, — many now vanished—, a list of old place-names compiled from William T. Davis's **"Staten Island Names, Ye Olde Names and Nicknames,"** and a chronology of events which will save the hurried date seeker still further time.

"High Tension" by Theodora Du Bois. Doubleday & Co. 1950.

Staten Island is not expressly named as the setting for Mrs. Dubois' latest book, but by numerous bits of description, — "the end of the island nearest the city" — "windows looking out to New York's Narrows, the lower harbor and the sea," — "standing on the wall watching the shipping," — "a steep place, dropping approximately three hundred feet to streets and small houses below," — one who knows will recognize it at once.

The author, who in private life is Mrs. Delafield DuBois of Dongan Hills, knows her terrain well. Though not a native Islander herself, she is the daughter of one, and married into one of the oldest Island families. Her background and surroundings have been reflected in more than one of her books, — which now have reached the impressive number of twenty-five. Not all of these have been mystery novels, by any means; a number have been juveniles, and her next, which will appear soon, is for children again. But her skill and experience in constructing the crime-puzzles which are so popular a part of the American literary output, is attested by the fact that **"High Tension"** was a selection of Doubleday's Crime Club.

M. A.



Diorama - Marsh Birds by Jean Leason Hitch

Our Dioramas

ROBERT MATHEWSON

"Oh, Mother, lookit!" "Dad! See! A muskrat!" "That bird in the back of the case is a marsh hawk."

This, and much more like it, which we hear many times a day, is the reaction of our younger visitors to the first units of the series of dioramas now being constructed on the main floor of the Museum. Their elders also show great interest in recognizing localities, identifying the birds, and studying the many details of our natural history which they do not always have the opportunity to see at such close range.

The units now in place are the first visible result of a long-contemplated plan of presenting three-dimensional exhibits of specific natural history subjects. The plan involves many practical problems, such as choice of subject, construction of frames, alteration of cases, purchase of equipment, suitable paintings and an accurate check on the subject matter, and the like. Actual construction was comparatively simple, but the choice of subject-matter and a method of checking correctness were more complex

problems. A Diorama Committee was formed, headed by Robert Mathewson, and consisting of Lee Ellison, mosses, lichens and geological specimens; Charles Ericson, flowering plants; Edwin Rundlett, trees and shrubs; Casimir Redjives, birds; Mathilde Weingartner, ferns and marine life. These excellent authorities examine all material going into the dioramas. With their combined information and the artistic ability of Mrs. Jean Leason Hitch and Gerald Bernstein, we believe we shall be able to present highlights of the Island's natural history in a form that will be of interest and also of use to its people.

Natural History Records

Section 1 — Birds

LEE A. ELLISON

Such a wealth of material has accumulated from observations reported to meetings of the Natural History Section of the Institute since the summer of 1947, that for ready reference and to inform readers of the Proceedings of the work being done by this section, abstraction and reporting in condensed form became necessary this year. The following report on field observations of Staten Island bird life will constitute the first of two summaries of Natural History records; the second report will cover all the other topics on which work is being done in this Section.

The current record of bird observations will contain several first-time observations of rare species or rare occurrences among familiar species. Credit for a major part of the present number and variety of observations should go to Mr. Casimir Redjives and Mr. Howard Cleaves. Credit is likewise due to a considerable number of other observers who, though the volume of their reports may be smaller, have spent many hours afield in the enjoyment of what has of recent years become a fascinating and wholesome hobby: bird watching.

To conserve space in this report, certain abbreviations have been used: FT for observations by group or individuals on special or regular monthly field trips; initials of the more frequently reporting observers as follows: CR — Casimir Redjives, HC — Howard Cleaves, MW — Mathilde Weingartner, RM — Robert Meyer, LE — Lee Ellison. Surnames only of other observers are given. Dates are approximate in most cases, being the date of the first meeting at which observations were reported. Asterisks (*) denote rarity and double asterisks (**) exceptional records.

American Bittern nesting CR 5/22/48

American Egrets Lemon Creek CR 7/27/47

“ “ large flocks Travis LE CR 7/24/48

“ “ Travis LE 7/17/49, 10/23/49

“ “ Tottenville FT 8/13/49

American Pipit FT 12/26/48

American Redstart Oakwood FT 5/27/48, 5/28/50

Baltimore Oriole Barrett Park FT 5/14/50

Bay-breasted Warbler Moravian FT 5/21/50

Blackburnian Warbler FT-s 5/11/47, 5/18/47, 5/11/48

Black Crowned Night Heron nuptial plumage Oakwood FT 4/9/49

“ “ “ wintering, FT 12/21/47, 12/26/48

Black Tern Tottenville FT 8/13/49

Blackpoll Warbler Kissell Ave. MW 7/27/48, FT 5/18/48

Black Throated Blue Warbler FT-s 5/11/48, 5/18/47, 5/19/48, 5/7/50, 5/14/50

- Black Throated Green Warbler FT-s 5/11/47, 5/18/47, 5/4/48, 5/7/50,
5/14/50, 5/21/50
Black Throated Green Warbler fall migration CR 9/27/47
Black & White Warbler, fall migrant, Richmond Valley CR 8/14/48
" " " spring migrant FT Egbertv. 5/4/48, FT 5/7/50,
5/14/50
*Blue-gray Gnatcatcher Kissell & Linden MW 1948, 1949
" " " Wolfes Pond 5/7/50
Blue-winged Teal Oakwood FT 5/7/50, Moravian 5/21/50
Blue-winged Warbler Oakwood FT 5/7/50
Blue-headed Vireo Wolfes Pond FT 5/7/50, Oakwood 5/18/50
Bluebird, Wolfes Pond FT 5/7/50
Brown Creeper FT 12/26/48
Brown Thrasher Wolfes Pond FT 5/7/50
- Canada Warbler Barrett Pk. FT 5/14/50, FT 5/18/48
Canvasback Duck FT 12/23/48
Cape May Warbler FT-s 5/19/48, 5/14/50, 5/21/50
*Catbird in winter FT 12/28/48
Clapper Rail nesting Beil 6/15/47, wintering FT 12/21/47
Common Loon FT 12/21/47, Wolfes Pond 5/7/50, Oakwood 5/28/50
Cliff Swallow FT 5/11/48
Chestnut-sided Warbler Wolfes Pond FT 5/4/48, FT 5/7/50, 5/14/50
Cooper's Hawk Moravian FT 6/11/47 —
Cormorant (European) Raritan Bay CR 10/25/47, Mt. Loretto CR 2/28/48
" " " Wolfes Pond FT 4/10/48
Crested Flycatcher Egbertville FT 5/4/48
- European Gull New York Bay Kovacs 1/31/48
- Florida Gallinule Oakwood CR 11/26/49 —
Fox Sparrow FT 12/21/47, 12/26/48
- Golden-crowned Kinglet FT Egbertville 5/4/48, Barrett Pk. FT 5/14/50
Golden-eye Duck Oakwood CR 2/25/50 —
Golden-winged Warbler Kissell Ave. MW 5/25/48
Gray-cheeked Thrush Barrett Park FT 5/14/50
Great Blue Heron FT 12/21/47
Greater Yellowlegs Wolfes Pond FT 5/7/50
- Hermit Thrush migrating, Travis MW 10/25/47
" " " wintering FT 12/21/47, 12/28/48
" " " spring migrant FT 4/10/48
**Herring Gull nesting, 2 eggs, Oakwood HC 6/26/48
Hooded Merganser FT 12/21/47
Hooded Warbler CR 5/22/48, migrating 5/25/47, FT 5/7/50
Horned Grebe Oakwood CR 11/26/49, FT 12/21/47, 12/26/48, 4/2/50
Horned Lark, female and three young, CR 7/27/47
" " " mating song, Oakwood FT 5/28/50
- Laughing Gulls, night flight MW 5/27/49
*Least Bittern nesting Fresh Kills HC 6/26/48
Least Flycatcher FT 5/18/48
Least Tern FT 6/15/48
*Lincoln Sparrow Barrett Park 5/14/50
Louisiana Water Thrush FT 5/11/47
Longspurs Oakwood CR 1/31/48, CR 2/28/48
**Loggerhead Shrike Kissell Ave MW 4/12/50
Long-billed Marsh Wren Oakwood FT 6/15/48, 5/28/50
*Long-eared Owls (18) Oakwood CR 4/7/50

Magnolia Warbler FT Egbertv. 5/14/48, Wolfes Pond FT 5/7/50
 Mallard Duck FT 12/21/47
 Meadow Lark FT 6/15/48
 **Mockingbird, Wolfes Pond FT 5/7/50

Nighthawk migrating St. George Ferry Burke 9/25/48
 Northern Water Thrush Barrett Park FT 5/14/50

Olive-backed Thrush Barrett Park FT 5/14/50
 Osprey, Oakwood CR 5/2/50

Palm Warbler Wolfes Pond FT 5/7/50

Parula Warbler " " FT 5/7/50

Phoebe, Egbertville FT 5/11/48

Pied-billed Grebe Oakwood CR 11/26/49, FT 12/21/47

*Pied-billed Grebe with young, Claypit Ponds HC 6/26/48

Pine Siskins, near New Dorp Light LE 12/26/48

Pine Warbler Kissell Ave. MW 7/24/48

Pintail Duck Oakwood FT 3/11/50

Piping Plover Oakwood HC 5/29/50

Prairie Horned Lark FT 6/15/47

Prairie Warbler Oakwood CR 5/22/48, FT-s 5/4/48, 5/7/50, 5/14/50, 5/21/50

**Prothonotary Warbler Moravian MW 4/21/50

*Purple Finch FT 5/4/47, FT Barrett Park 5/14/50, Moravian FT 5/21/50

Purple Sandpiper Oakwood Kovacs 2/28/48, Wards Point Decker 11/27/48

*Red-bellied Sandpiper Oakwood CR 10/22/49

Red-breasted Merganser Oakwood CR 4/2/50, FT 12/26/48

Red-shouldered Hawk Watchogue FT 4/8/50

Robin, FT 12/26/48

Rose-breasted Grosbeak FT-s 5/11/47, 5/11/48, 6/15/47, 5/14/50

Rough-legged Hawk FT 12/26/48

Rough-winged Swallow Wolfes Pond FT 5/7/50

Ruby-crowned Kinglet Egbertville FT 5/4/48

Ruddy Duck Grasmere RM 10/25/49

Ruddy Turnstone Oakwood FT 5/28/50

Rusty Blackbird FT 12/21/47

Savannah Sparrow Wolfes Pond FT 5/7/50

Scarlet Tanager Coles 5/11/50, FT 5/7/50

Seaside Sparrow FT 6/15/48

Sharp-tailed Sparrow FT 6/15/48

Short-eared Owls Oakwood CR 12/26/48, RM 12/17/49

*Shoveler Duck Oakwood MW 4/12/50

Snow Bunting Oakwood FT 12/21/47, Oakwood CR 2/28/48, 11/20/49

Snowy Owl, Oakwood RM 12/17/49, Fairview Ave. Rundlett 12/7/49

Solitary Sandpiper FT 5/11/48

Swamp Sparrow FT 12/21/47, 6/15/48

Towhee in winter FT 12/26/48

Tree Swallows HC 6/15/47

Turkey Vulture CR 11/23/49

Veery Clove Lakes FT 5/14/50, Lambert's Lane MW 5/24/50

Warbling Vireo Mathewson 6/15/47, FT 5/14/50

Whippoorwill Cole 5/11/47, Coles 4/7/49

" late singing Plumb 9/25/48

White-eyed Vireo FT 5/11/48

White-winged Scoter FT 12/21/47

Wilson Snipe Oakwood CR 4/2/50, FT 12/28/47

Wilson's Warbler FT-s 5/23/48, 5/21/50

Wood Duck Brady's Pond MW 11/26/49, Wolfes Pond FT 4/10/48

Woodcock Courtship Flight Lambert's Lane FT 5/12/49, Old Town Ness-
linger 3/25/50

Wood Pewee Clove Lake FT 5/7/50

Yellow-billed Cuckoo FT 6/15/48

*Yellow-breasted Chat wintering, 27 Bosworth Ave MW 2/15/50

Yellow-breasted Chat, summer, FT 6/15/48

*Yellow-crowned Night Heron Wolfes Pond CR 7/27/47, FT 4/10/48,
FT 5/7/50

Yellow Warbler Wolfes Pond FT-s 5/7/50, 5/14/50

Yellow Palm Warbler (early) FT 4/10/48, (seasonable) 5/11/48

Yellow-throated Vireo Moravian FT 5/21/50 -

The above list by no means covers all the birds seen on field trips or by individual observers. No attempt has been made to list such common birds as Robin, English Sparrow, Catbird, Crow, etc. as they ordinarily are reported on all field trips and are included in the winter census lists sent to the National Audubon Society. This list is intended to cover the observations of less common or rare birds, or rare occurrences or records of more common birds.

New Members

We welcome the following members who have joined us since the date of our last Proceedings:

Charles Allou	Mrs. John E. Massengale
Joseph Carstang	Willis J. McCullagh
Charles R. Cook	Thomas A. McGovern
Miss Jane Davies	Stephen A. Murphy
Everett Duester	Mrs. Mario Nevi
William A. Finn	Mrs. Mario Porazzi
Mrs. Antonette Freeman	Mr. and Mrs. Carl D. Rabsey
Mr. and Mrs. Gerald Griffin	Miss Dorothy R. Rader
Mr. and Mrs. Royal Scott Gulden	James P. Rhees
Dr. Martin Haberfeld	Mrs. Arthur Russell
Walter A. Heintz	Joseph Rutmayer
Miss Harriet Hicok	Mrs. W. Elmer Schell
Mrs. Carl J. Jefferson	William Smith
Miss Emily Kolff	Mrs. S. D. Stickle
Mrs. Walter Langsam	Mrs. F. G. Strecker
William H. Lea	Mrs. Jere Tamblyn
Melvin Levine	Irwin Tuck
Walter K. Lyngaas	Mrs. Marion Ventosa
Mrs. Eleanor H. Wells	

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Charles Ericson	Staten Island Lodge 841
Miss Marion Holyoke	B.P.O.E., through George F. Bain.
Mrs. J. M. Helm	
Mrs. Pierre Jay	
Manuel J. Johnson	

Institute Notes

Davis Memorial Lectures, 1950-51. Five memorial lectures with motion pictures in color will be presented during the season, as follows:

- Nov. 18, "Japan Journey," by Karl Robinson.
- Jan. 20, "Safari in Africa," by Murl Deusing.
- Feb. 17, "Algeria," by Clifford J. Kamen.
- Mar. 17, "Valley in the Clouds," by Nicol Smith.
- May 19, "The Universe of Palomar," by Dr. Ruoy Sibley.

Annual Christmas Concert. As usual, a Christmas Concert will be given, on the evening of December 16. Program and participants will be announced in the monthly calendar later.

Leason Painting Honored. A painting by Percy A. Leason, President of the Section of Art, entitled "Yacht Basin," has been awarded by the National Executive Committee of American Artists Professional League to Oregon State College, Corvallis, Oregon, as winner of first prize for paintings used to promote American Art Week. The painting now hangs in the College's Memorial Building.

Courses. The Museum is again presenting a series of adult courses designed to further the interests of the community in the arts and sciences, and the Fall term is now in session. Subjects offered are: Ceramics and China Painting; Costume Jewelry Making; Commercial Art; Painting, Drawing and Composition; Sculpture; Local History; Acting and Stage Production; Nature Study; Astronomy; Choral Techniques; Opera Lecture Recitals; and Piano Lecture Recitals, "Three Centuries of Keyboard Music." The Spring term will begin in February, 1951. For further information call the Museum.

Woman's Auxiliary; President's Reception and Tea. This annual event will be held Thursday, October 26, at two o'clock. Mrs. Fred F. Richardson is President again this year. Presidents of other Island women's organizations will be guests and an interesting program will be presented.

Radio Program. The "Staten Island Today" series of radio programs continues to be heard each Monday at 10:30 over Station WNYC. This series features Staten Island topics and personalities, and is broadcast from the Museum gallery.

Resignations. We regret to announce two resignations from our staff, Miss Jean Leason, Art Curator, August 31, and Mrs. Alice Reichenbach, Director of Publicity, September 22. Miss Leason became Mrs. Robert Anderson Hitch on May 7, in a pretty ceremony at the Unitarian Church on Staten Island.

Art Curator. Gerald Bernstein, new head of the Art Department, began his duties in September. Mr. Bernstein's background includes a Bachelor's degree from New York University, Master's degree from the Institute of Fine Arts of that University, and study at the Art Institute of Indianapolis and the Art Students' League of New York. His work has included portraits, landscapes, street scenes and other subjects. During his four years in the Army, three of which were spent overseas, he was in North Africa, Sicily, England, France, Belgium and Germany. Among his first undertakings at the Museum will be the continuation of the series of dioramas which are planned for the main floor, and are already attracting much attention.

Accessions

A number of highly interesting accessions have been received since our last report. We mention the following few as among the outstanding items:

A set of old United States flags from Staten Island Lodge 841, B.P.O.E., through George F. Bain; the old metal door-plate of "John Collins, Justice of the Peace, Commissioner of Deeds," from his grandson, Harry Davies; a fine collection of letters, papers and pictures of the Burrill, Curtis and Shaw families, the gift of Mrs. Pierre Jay through Miss Marion Holyoke; a copy of first edition of "Walks and Talks in England," by Frederick Law Olmsted, the gift of Mrs. John Cullen; a photograph of Miss Elizabeth Curtis, from H. T. Magruder; "Historical and Statistical Gazetteer of N. Y., 1860," from L. G. Dury.

Necrology

Elias Bernstein, a native of Staten Island and a member of this Institute since 1924, died June 9. Mr. Bernstein had retired ten years ago from his successful law practice, and had devoted himself since that time to public service. His civic activities and connections were too numerous to mention here, but outstanding among them were his efforts in behalf of the stadium building program of the Staten Island War Memorial Association, of which he was President, and his activity in school work. He was at the time of his death chairman of Local School Board 54. His home was at 2 Emerson Drive.

Mrs. Agnes Vinton Miller, a resident of Staten Island for twenty-five years, died September 5 at her home, 267 Stafford Avenue, Annadale. Mrs. Miller, a member of the Institute since 1946, was the widow of Capt. Thomas I. Miller, who died in May, 1948, and who had been a member for twenty-two years. Capt. Miller, son of the well-known American artist, William Rickard Miller, was a collector of radiological minerals; Mrs. Miller was also a collector, and a microscopist. After her husband's death she continued these activities, and when her sight failed, she directed others in the care of her collections. She was also a member of the New York Mineralogical Club, and the American Museum of Natural History.

THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES

DIRECTORY, 1950-1951

The Staten Island Institute of Arts and Sciences is incorporated under the laws of the State of New York for the purpose of promoting an interest in the arts, sciences and history, particularly as they relate to Staten Island. It does this through a wide range of activities as listed below, and in maintaining a Museum at 75 Stuyvesant Place, and Office and Library in the Davis House at 10 Stuyvesant Place and the Britton Cottage at New Dorp. The City of New York contributes annually toward the cost of maintaining the Museum.

Membership in the Institute consists of two classifications: (1) Group membership: (a) Sections, formed by five or more members to carry out some particular branch of study; (b) Affiliated Societies; and (2) Individual Membership: Patron \$1,000, Life Member \$100.00, Annual Member \$3.00. Anyone interested in helping carry out the purposes of the Institute is invited to become a member.

Officers

President Emeritus, Dr. James P. Chapin

President, Manuel J. Johnson

2nd Vice-President, Joseph F. Burke

1st Vice-President, Dr. Frank A. Strauss

Treasurer, Robert M. Leng

Secretary and Director, Roswell S. Coles

THE WOMAN'S AUXILIARY

The Woman's Auxiliary was organized in 1909 to support the interests of the Institute in all activities. Any woman interested in the object of the Auxiliary is eligible for membership. Meetings are held the last Wednesday in each month, October to May inclusive, in the Museum. The October meeting consists of a President's Reception in the afternoon, other meetings are at 10:30 A.M. They consist of a short business meeting followed by an interesting program. Annual dues \$1.00 payable April 1.

President, Mrs. Frederick F. Richardson, 340 Bard Ave., S. I. 1

THE INSTITUTE COUNCIL

The Institute Council was formed in 1942 to co-ordinate group activities and plan Institute programs. Each Section and Affiliated Society is represented by two delegates and meetings are held once a year.

President, Walter Kuhn, 58 Pembroke Ave., S. I. 1

SECTIONS

Section of Art

Purpose: To foster the progress of Art on Staten Island.

Membership: Membership is open to anyone expressing an interest in the objects of the Section.

Exhibiting members are selected on the basis of their work.

Activities: Two annual exhibitions for which members may submit work, special exhibition Annual Artists Carnival. Classes in Arts and Crafts.

Dues: Annual \$3 membership in the S. I. Institute of Arts and Sciences.

President: Percy A. Leason, 56 Baltimore St., S. I. 8

Section of Literature — The Belles Lettres Society

Purpose: To foster appreciation of, and to encourage literature and other fine arts among its members, and in the community.

Membership: Active members shall be residents of Staten Island who have shown definite interest in Literature and other Fine Arts.

Meetings: Monthly from September through June on third Sunday afternoons at members' homes. Members may bring guests.

Dues: Two dollars per annum.

President: Raymond M. Safford, 81 Acacia Ave., S. I. 8

Section of Microscopy — S.I. Microscopical Society

Purpose: To hold an Annual Microscopical Exhibition in co-operation with the Staten Island Institute of Arts and Sciences and by means of monthly meetings provide opportunities for adult workers in the natural and physical sciences to get together and exchange experiences. The Society is sponsoring an intensive study of the serpentine rock of Staten Island and the relation of plant and animal life thereto.

Membership: Open to those who are members of the Institute and who use the microscope in their scientific studies or occupation.

Meetings: Second Friday evening of each month from October through May.

Dues: Annual \$3 membership in the S. I. Institute of Arts and Sciences.

President: Joseph F. Burke, 25 Curtis Place, S. I. 1

Section of Music — Staten Island Oratorio Society

Purpose: To study and present Oratorios and other choral music and to promote good music on Staten Island.

Membership: Active and Associate.

Rehearsals: Weekly on Monday evenings at the Museum.

Dues: ACTIVE: \$10.00 per year, in four equal installments.

ASSOCIATE: \$5.00 per year, due in September, entitles member to two tickets for each concert.

President: Mrs. Elwood Cole, 4662 Amboy Rd., S. I. 12

Section of Natural History

Purpose: To encourage and promote an interest in Natural History, particularly in regard to Staten Island and the immediate vicinity. To promote organized outdoor and indoor meetings for the study and recording of Staten Island Natural History.

Membership: Membership is open to any member of the Institute expressing an interest in the objects of the Section.

Meetings: Field trips and outings, bird walks, nature study groups and special programs.

Dues: Annual \$3 membership in the S. I. Institute of Arts and Sciences.

President: Miss Mathilde Weingartner, 17 Amelia Court, S. I. 10

Section of Photography — S. I. Camera Club

Purpose: To further the knowledge and practices of pictorial photography; to foster exhibitions, competitions, demonstrations and courses in photography; to promote the interests of amateur motion picture and color slide making; to encourage the values of other branches of amateur photography as a hobby; and to join with and/or associate with other clubs, organizations, societies and councils fostering amateur photographic activities.

Membership: Open to anyone expressing an interest in the objects of the Club. Regular members, anyone over 16 years; Junior Section members, anyone over 14 years attending public school.

Meetings: Every Wednesday evening 8:30 P.M. from September through June in the Museum as follows: 1st Wednesday, Business meeting; 2nd Wednesday, lecture; 3rd Wednesday, Color Slide Competition or motion picture competition; 4th Wednesday, Print competition. Junior Section meets every Saturday afternoon 2:00 P.M.

Dues: Annual dues \$6.00 which includes membership in the S. I. Institute of Arts and Sciences. Junior Section membership annual dues \$1.00.

President: Ferd. Olson, 63 Howton Ave., S. I. 8

Section of Handcrafts

Purpose: To promote interest and activity among Staten Island craftsmen, to hold classes, lectures and other events, to arrange exhibitions, and to permit members who wish to sell their craft work to display it in the Museum Shop.

Membership: Open to any member of the Institute expressing an interest in crafts.

Meetings: Monthly, at the Museum, on dates announced in Museum calendar. Demonstrations, lectures etc. will be given. Craft sale in November, and craft exhibit in March.

Dues: Annual \$3 membership in the Staten Island Institute of Arts and Sciences.

President: Gladys Renfield, 49 Cliff Street, S. I. 5

AFFILIATED SOCIETIES

The Fortnightly Club

Purpose: The object of the Club is intellectual culture and entertainment.

Membership: Names proposed by members are referred to the Executive Board for canvass of the Club before being voted upon. Members shall give an original paper every alternate year.

Meetings: Fortnightly, Mondays, except when special holidays intervene, at the homes of members.

Dues: Two dollars per year.

President: Miss Annie A. Davison, 93 Evelyn Pl., S. I. 5

The Philatelic Society

Purpose: To assist its members in acquiring knowledge in regard to philately, to cultivate a feeling of friendship among philatelists and enable them to associate with members of similar societies and, in furtherance of these objects, to assist its members in acquiring and disposing of stamps of various kinds.

Membership: Any person of good character above the age of 21 years interested in philately may become a member of the Staten Island Philatelic Society. There shall also be eligible for Junior membership persons of good moral character interested in Philately below the age of 21 years.

Meetings: The second and fourth Monday evening of each month from September through June in the Museum.

Dues: Initiation Fee \$1.00; Dues \$2.00 per annum.

President: William F. Hobbs, 3632 Richmond Rd., S. I. 6

Richmond County Chapter

N. Y. State Society of Professional Engineers

Purpose: To preserve the traditions and advance the ideals of the engineering profession, to uphold its dignity and enhance its honor, to raise the standards of preparation for its practice, and to extend its sphere of influence in and of service to society.

Membership: Only Licensed Professional Engineers and Land Surveyors of the State of New York may apply for membership.

Meetings: The first Wednesday of each month from September through June, at the Museum.

Dues: Annual dues are \$20.00 which includes membership in the National and State Societies of Professional Engineers and the local chapter. In the case of Land Surveyors annual dues are \$13.00 as they are not included in the National Society.

President: Ernst P. Neuschwander, 197 Jewett Ave., S. I. 2

Treble Choral Ensemble

Purpose: To promote the love of group singing through participation and the study of the best in choral literature for women's voices. To aid worthwhile community projects through proceeds of concerts.

Membership: Basic knowledge of the rudiments of music. Voices are chosen on the basis of quality and the ability to blend with other voices of the ensemble. Interest and love of good music is another requirement.

Meetings: Every Tuesday evening from September 21 through May in the Museum.

Dues: \$10.00 a year payable in two installments in September and January. Cost of music is included in this fee.

President: Mrs. Howard Shadwell, 1215 Todt Hill Rd., S. I. 4

Staten Island Poetry Society

Purpose: To afford a meeting ground for people interested in poetry.

Membership: The only requirement is an interest in poetry. Members need not necessarily be writers themselves.

Dues: Regular members \$2.00 a year; Associate members (those not living on Staten Island) \$1.00

President: Dr. Thyra H. Josselyn, 64 McCully Ave., S. I. 6

Staten Island Italian Historical Society

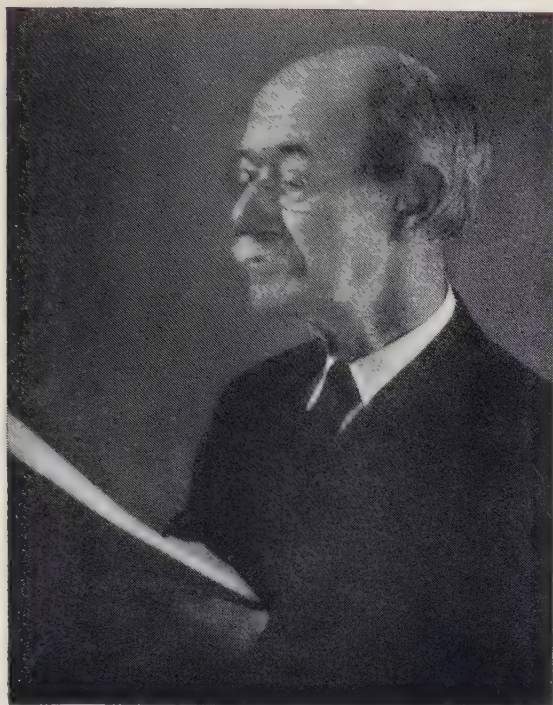
Purpose: The enhancement of culture in the field of Italian-American history; and to bring together the Italian and American points of view.

Membership: Anyone interested in our Italian historical background is eligible for membership.

Meetings: Once a month except during the summer months, at the Staten Island Museum.

Dues: Two dollars a year.

President: Ralph Cerreta, 30 Bay Street, S. I. 1



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PROCEEDINGS of the
STATEN ISLAND INSTITUTE
of ARTS and SCIENCES



VOLUME XIII

NUMBER 2

January, 1951



ROBBINS REEF MOTOR CO.

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A STATEMENT OF POLICY

The new car market is tight. The used car market is mixed. No one can foretell whether or not the necessities of the future will dry up the flow of new cars and cause a drastic reduction in auto agency employees. The situation is fluid and can become critical in both new car purchases and in the servicing of existing models.

We hope these things do not happen but this we do know: no matter what the eventuality, Robbins Reef must continue to do its utmost to assure you efficient and dependable service from the fine Buick that you now own, and, when you need your new Buick, we must lend every effort to see that you get it.

If you are considering a new car will you help us to serve you by placing your order as soon as possible.

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The "Big Blow" of 1950

EDWIN RUNDLETT

The duty of caring for Staten Island's street trees has given the writer three very exciting days;—the day of the hurricane in 1938, that of the hurricane of 1944, and November 25 of this year, a day of downpour, gales and floods.

Adequately to describe all that was seen during this last storm would take many pages. The Staten Island Advance gave such a dramatic account of the flooded colonies along the South Shore that repetition here would serve no purpose. In this article will be told things not stressed in the papers. Mention must be made, however, of the fine job done by the Borough President's men, the Sanitation Department, the Police Emergency Squad and other agencies, in relieving distress.

First, a few words about the storm itself, provided by the Weather Bureau at the Battery Office. The storm center was first noticed in Western North Carolina on the afternoon of the 24th. It moved northward east of the Appalachian range. Its closest approach to this city was at 1:30 P.M., when centered at Allentown, Pennsylvania. A second storm, moving eastward from Erie, Pennsylvania, extended the suffering to record-breaking proportions for the northeast.

At Battery Place the maximum wind velocity came at 3:05 P.M., when it was 76 m.p.h., and at Newark 108 m.p.h. At Battery Place winds of gale force were recorded continuously from 2:00 A.M. to 10:00 P.M. Rainfall for this day was 2.29 inches.

In the case of the hurricanes of 1938 and 1944, the wind veered half-way round the compass in the course of a few hours, the greatest force coming from the north. Most of the trees fell southward. This year most of the trees fell toward the west. The hurricanes caused much more branch breakage because of their twisting action; and coming while the foliage was on the trees, they felled more trees.

In the recent storm the greater number of trees that fell (about 1,000 in streets and parks) were Carolina Poplars, Red and Silver Maples, Black Locusts, Box Elders, Elms, Willows, Sassafras, Spruces and Red Cedars. Trees most injured by branch breakage were Poplars, Silver Maples, Lindens, Elms, Willows and Ash. Trees notably wind-resistant were Planes or Sycamores, Sweet and Sour Gums, Tulips, Birches, Beeches, Oaks, Gingko, and Hornbeam. Norway Maples were neither very resistant nor very sturdy.

It is to help in the selection of proper street tree varieties that permits are required before property owners may plant street trees. People today are suffering from the mistakes made by the previous generation. Let us not have our children say the same of us.

Here is what happened, and it explains why Forestry workers of the Park Department must spend most of their time cutting down trees when it would be better to be planting and pruning. Owners of large tracts of land subdivided and built houses to sell. They provided planting strips two to two and a half feet wide, lined the streets with inexpensive, fast-growing trees, and then dedicated the streets to the City. The cost of maintaining Poplars and Silver Maples is prohibitive, yet these are the varieties inherited by the City in Westerleigh, Sunnyside, Castleton Corners, Midland Beach, Meiers Corners, Oakwood Heights and elsewhere. Plane trees, though sturdy, soon outgrow a thirty-inch planting strip. Start cutting roots, and a windstorm will finish the job.

In recent years planting strips have usually been made wider, but here and there are exceptions. Lander Avenue, at Bull's Head, has a two-foot strip, and was this fall planted with Plane trees that need double this space. What will the next hurricane do to them? Silver Maples were planted on Elkhart and Fairfield Avenues, Great Kills, last year. It is my fondest hope that some way may be found to make subdividers feel that it is to their interest to provide adequate planting strips and to select tree varieties that for many years will be an asset to the public.

Enough about trees! On that same memorable 25th of November there was a snowstorm that not everybody saw. The flakes were as big as golf balls, some larger, some smaller. Throughout Clove Lakes Park and as far west as the Armory on Manor Road, the "flakes" came down thick and fast, coating trees in Yuletide fashion. Closer examination showed that the "flakes" were of a cottony substance. Visions of a wrecked cargo ship arose. Sunday morning the "snow" was traced to Luther and Cook Halls, Wagner College, where the insulated roofs had blown off. Evergreens on the campus and trees on the hillside were nicely decorated for Santa. Here's hoping Santa saw!

Think now of summer and of the beaches. Bungalow owners may restore their homes, but Nature has made permanent alterations in their property. At Wolfe's Pond Park, hundreds of men on relief laboriously built a wall of rocks to retain the embankment next to the picnic ground. In spite of that wall, the bank receded on this one day twenty to twenty-five feet, and the rocks are back where bathers like sand. Only by dumping many loads of sand at its outlet was Wolfe's Pond prevented from uniting with salt water.

Note these figures: 1938 - 1944 - 1950 - 1956?

If 1956 continues a six-year cycle of hurricanes here are some hopes:

1. That there will be fewer Poplars and Silver Maples on Staten Island, but more trees of sturdy nature.

2. That the narrowest planting strip will be four feet wide. Elms need ten feet.

3. That a centralized disaster organization will be functioning that will not depend upon telephone service. Phone lines might be down.

4. That this organization will be prepared to equip and employ to advantage the many willing volunteers that would offer their services almost instantly upon the sounding of a siren. Civil Service forces cannot be expanded in a hurry, nor is it practicable to maintain a stand-by force of them.

5. That sight-seers will stay at home and not impede relief workers. There were too many at the beaches on the 26th.

6. That people whose Blue Spruces and fruit trees blow over will not call upon civic agencies for help, as many did this time.

7. That yours truly will be on hand to do his bit.

Christmas Bird Count. 1950

MATHILDE B. WEINGARTNER

On December 30th from 7:30 A.M. to 3 P.M. eight observers groped around in the fog to count the birds that we believe are wintering on Staten Island. After 3 P.M. visibility shrank down to about 25 feet and it was literally impossible to continue the project.

No really rare birds were seen although considering the fog some surprising discoveries were made. Large flocks of Goldfinches and Pine Siskins were feeding on seedballs of Sweet Gum trees. A Great Blue Heron loomed out of the fog at Silver Lake Golf Course. At the beach the observers were able to see only what birds were within 300 ft. of their field glasses. The following is a list of the species and numbers observed that day:

Great Blue Heron 1; Black Duck 10; Scaup Duck 100; American Golden-eye 24; Bufflehead 6; Red-breasted Merganser 1; Red-tailed Hawk 1; Marsh Hawk 3; Sparrow Hawk 1; Pheasant 9; Killdeer 11; Black-backed Gull 2; Herring Gull 1013; Bonaparte's Gull 52; Mourning Dove 6; Flicker 1; Downy Woodpecker 14; Blue Jay 8; Crow 14; Black-capped Chickadee 7; White-breasted Nuthatch 3; Robin 4; Ruby-crowned Kinglet 2; Starling 611; English Sparrow 141; Meadowlark 19; Redwing 7; Purple Grackle 1; Cardinal 25; Pine Siskin 33; Goldfinch 24; Junco 59; Tree Sparrow 46; White-throated Sparrow 93; Swamp Sparrow 9; Song Sparrow 67. Total Species 36. Total Individuals 2,428.

A report turned in too late was that of a Towhee seen by Wm. H. Lea of Ward's Point, Tottenville.

In order to achieve a more accurate count of the birds wintering on Staten Island, Charles Pearson went to Oakwood Beach the following day to see what was in the waters off shore. This day was clearer, with much better visibility. Pearson's report read as follows:

Great Blue Heron 1; Mallard Ducks 2; Scaup Ducks 400; American Golden-eye 6; Bufflehead 6; Old Squaw 28; Ruddy Ducks 2; Cooper's Hawk 1; Marsh Hawk 8; Sparrow Hawk 4; Pheasant 7; Black-backed Gull 1; Herring Gull 100; Ring-billed Gull 1; Horned Lark 1; Starling 80; Meadowlark 3.

These birds were seen in addition to the ones counted the day before, making a total of 42 species and 3,088 Individuals.

On the Sunday Trip Charles Pearson discovered 6 dead birds. One Common Loon had been washed up on the shore; one Screech Owl had been hit by a car probably the night before; 4 Barn Owls were found, 3 in one and 1 in another of several

pipes sticking out of the ground. These pipes afford resting places for the owls, but apparently they fall in and are unable to climb out because the pipes are not large enough to accommodate the owls' wing-spread.

The observers taking part in the census were:
Roger Christiansen, Lee A. Ellison, Henry Flamm Jr., Robert C. Meyer Jr., Charles Pearson, Casimir Redjives, Miriam Stryker and Mathilde B. Weingartner.



"WINTER"

Photo by W. R. Flader

Selected by the Staten Island Camera Club in its annual competition as "The Print of the Year."

Some Extremely Rare Stamps

ELLIOTT R. BURGHER

Two years ago the history of the Staten Island Express Post was published in the Proceedings of the Staten Island Institute of Arts and Sciences (Jan., 1949). Since that time several very interesting covers bearing stamps of that Express Company have been added to the author's collection.

One cover had the six-cent vermilion stamp, and the Boyd's Express Post hand stamp in black. This letter, written by Francis L. Hagadorn, owner of the Staten Island Express Post, was carried to New York by that company and there given to Boyd's Express Company to be delivered to its final destination. Only two covers are known to be in existence with the six-cent stamp on. This is one of them. The other is in the famous collection of Mr. Caspari of New York City. The one shown here in the photograph was originally in the collection of Count Ferrari, which was sold in Paris June 18, 1924, by the French Government for World War I Reparations. This cover was acquired recently from the Henry C. Needham collection. Many famous dealers and collectors in New York City have never seen a six-cent Staten Island Express Post stamp, on or off cover.

The letter contained in this cover was as follows :

Aug. 18, 1851.

B. S. Rowley Esq.

This note of yours, together with the copy of a notice was received at my office a few days ago. Our terms of advertising require payment in advance, and therefore your notice has not been inserted. You may easily calculate the cost of the advertisement, and forward the amount with another copy. We will take pleasure in attending particularly to it.

Very respectfully,

F. L. Hagadorn.

Stapleton, Aug. 18, 1851.

(Francis L. Hagadorn, as was explained in the previous article, was the son of William Hagadorn and the father of William P. Hagadorn, all newspaper printers and publishers on Staten Island.)

The cover with the three-cent vermilion stamp on, also has the Boyd's Express Post and "Paid" hand stamp in red. This letter also was carried by the Staten Island Express Post to New York City and then given to Boyd's Express to deliver to final destination. Covers with the three-cent stamp on are also very rare, there being only about six known, in various collections.

This letter also was written by Francis L. Hagadorn, and refers to his express business. He says:

Stapleton, May 22, 1850
(Thirty-three years old today)

Dear Par.-

When you are called upon by persons in regard to my advertisement in the Sun please explain that my reason for disposing of a joint interest is that I have other business to attend to here which prevents my giving personal attention to both ends of the route. I shall require my partner to put on a stylish express wagon and horse, and to give me satisfactory references as to his pecuniary ability to do this, as well as his general character for activity, application and integrity. My object is to be relieved from all care of the New York end of the route, and to have a man there who will be perfectly reliable. To such a person I can secure the monopoly of all the cartage which comes up in the boats, besides that which comes through our Express. The business is a *baggage* and *package* Express connected with the Staten Island Ferry.

Affectionately yours,

F. L. Hagadorn

All well.

The small reprint sheet of the three-cent stamp was acquired from Ezra Cole, who says it was printed about 1875. The printer is unknown. These reprints were made to sell to stamp collectors to fill the space in their albums, because the stamp was so rare.

The cover with the label of the Express Company on was also addressed by Francis L. Hagadorn, as is evident from the handwriting. The color of the label is yellow with gold letters; the size two inches long and one and five-sixteenths inches wide. Printing on the label is:

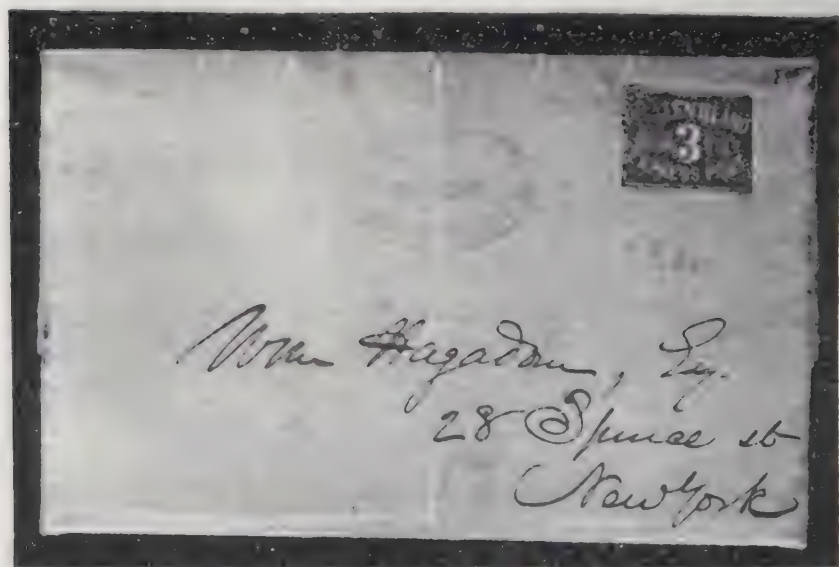
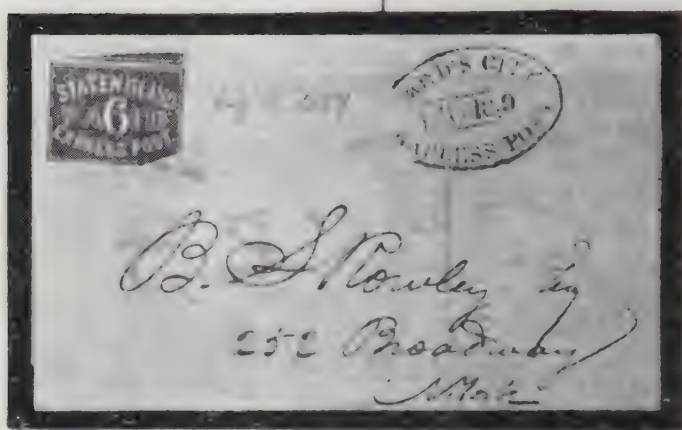
Forwarded by
Hagadorn & Co's
Staten Island & New York
Express

F. L. Hagadorn, Stapleton, S. I.
Office in New York at the Staten Island Ferry foot of
Whitehall Street.

This is the only letter that has been found with the Staten Island Express label on, so far as we know.

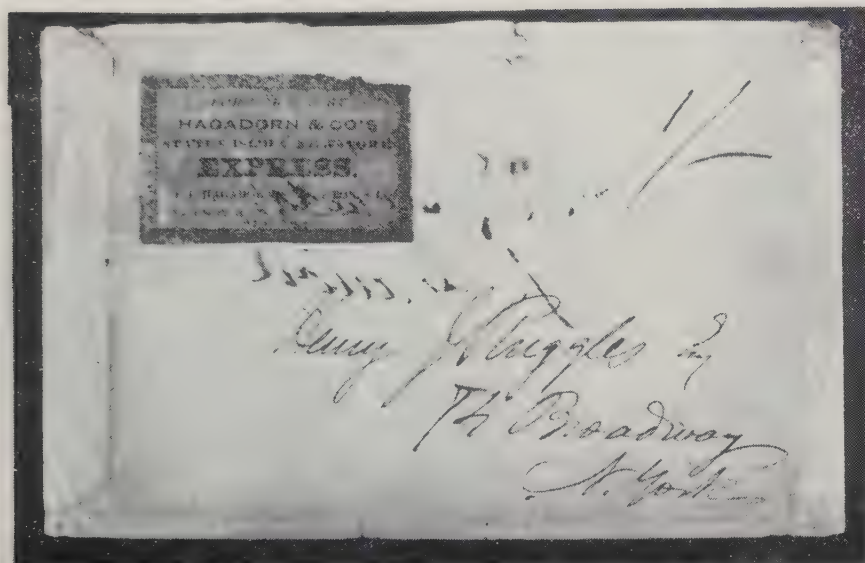
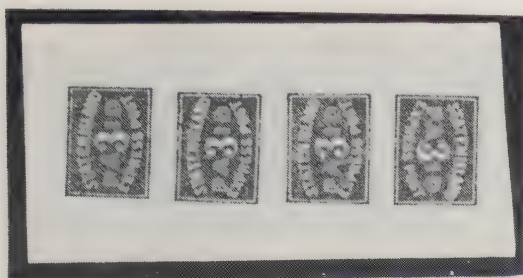
The Staten Island Express Post delivered letters also on Staten Island for three cents. The United States Post Office charged five cents until June 30, 1851.

The future should discover more letters with the Staten Island Express Post stamps on them, in correspondence preserved by some of our old Island families.



COVER WITH RARE SIX-CENT STAMP OF STATEN ISLAND EXPRESS POST
(From the Collection of Elliott Burgher)

COVER WITH RARE THREE-CENT STAMP OF STATEN ISLAND EXPRESS POST
(From the Collection of Elliott Burgher)



RARE REPRINTS OF STATEN ISLAND EXPRESS POST STAMP

(From the Collection of Elliott Burgher)

COVER WITH EXTREMELY RARE STATEN ISLAND EXPRESS LABEL

(From the Collection of Elliott Burgher)

Natural History Records
Section II—Trees, Plants, Animals, Amphibia and Reptiles,
Marine Life, Insects, Ecology, Mineralogy,
Paleontology, Meteorology

LEE A. ELLISON

By way of continuing the natural history records summarized in the previous issue of our Proceedings, and completing the abstraction of those records for the years 1947-1950, following is a condensed report of observations and investigations presented to the Section of Natural History during that time.

As in the previous summary of bird observations, the abbreviation "FT" signifies observations made on regular monthly or special field trips by members of the section, and dated as of the first study group meeting or regular monthly meeting at which the report was made. Initials only of the more frequent observers are given as follows: ER—Edwin Rundlett; CC—Cleeve Cooper; LE—Lee Ellison; CE—Charles Ericson; MW—Mathilde Weingartner. The abbreviation "RF" indicates that the observation or record is discussed in detail in the Reserve File, which is in the custody of a committee handling natural history subjects of an investigative or of a confidential nature.

Records pertaining to Botany are the first recorded herewith:

Trees

- Alder, European *Alnus alnus*, Buck's Hollow, FT 1/1/47
Albizzia julibrissin var. rosea, occurrence and introduction, LE 7/24/49
Andromeda, privet *Xolisma ligustrina* MW RF
Birch, red (river) *Betula nigra*, Rossville ER 4/2/48
Birch, red (river) *Betula nigra*, distribution on S. I. ER RF
Butternut, *Juglans cinerea*, 119 Taylor St. ER 7/27/46
Cedar of Lebanon, *Cedrus Libani*, Eltingville, FT 9/13/47, 1/14/50
Chestnut, Hybrid, American X Chinese ER 7/24/49
Chestnut, American, fruiting, Charleston, FT 9/14/46
Chestnut American, *Castanea dentata*, staminate flowers Grasmere FT 7/12/47
Chokeberry, purple-fruited, *Aronia atropurpurea* ER 12/12/46
Chokeberry, red-fruited, *Aronia arbutifolia* ER 12/12/46
Deodar Cedar, *Cedrus Deodora*, Bayview Ave. Princes Bay, ER 6/12/48, FT 1/14/50
Epaulette Tree, *Pterostyrax hispida*, Sommers Lane, FT 6/8/46
Forsythia, late flowering (Dec. 22) Moravian Cemetery, FT 12/28/46
"Hedge Maple" (Spindle tree) *Euonymus europaeus*, Page Ave., ER 9/27/47
Holly, American, *Ilex opaca*, Dellwood & Holly Aves., ER FT 2/13/48
Holly, American, *Ilex opaca* Walker Park CC 12/12/46
Hop Hornbeam, *Ostrya virginica*, Range on Staten Island, ER, LE, RF
Kadsura tree, *Kadsura japonica* CC 7/16/46

Magnolia, cucumber, *Magnolia acuminata*, 2 Hasbrouck Rd. FT 7/16/46
 Magnolia, swamp, *Magnolia glauca*, Page Ave & Hylan Blvd. FT 6/14/47
 Magnolia, swamp, *Magnolia glauca* Range on S. I. LE, ER, RF
 Moonseed, *Menispermum canadense*, Tottenville, FT 8/13/49
 Moonseed, *Menispermum canadense*, Forest Hill Road, LE 8/11/49
 Opuntia, Sp.? Dr. Strauss, RF
 Pawpaw, *Asimina triloba* 408 Page Ave. FT 6/14/47
 Plum, Beach, *Prunus maritima*, ER RF
 Persimmon, *Diospyros virginiana*, Range on Staten Island, ER, LE, RF
 Pine, northern gray *Pinus banksiana* Todt Hill and Eleanor St. FT 4/8/46
 Pine, Scrub, *Pinus virginiana*, Charleston, FT 9/16/46
 Poplar, Japanese, *Populus Maximowizii*, 3 Fucini St., Sunnyside, ER 10/26/46
 Poplar, Swamp, *Populus heterophylla*, Watchogue, ER 11/26/49, RF
 Privet *Andromeda*, *Xolisma ligustrina*, MW, RF
 Quercus Rudkini, Page Ave & Hylan Blvd. FT 6/14/47
 Quercus Rudkini, Distribution, ER, RF
 Swamp Magnolia, *Magnolia glauca*, Page Ave. & Hylan Blvd. FT 6/14/47
 Sheep Laurel, *Kalmia angustifolia* Page Ave. & Hylan Blvd. FT 6/14/47
 Silverberry, *Elaeagnus argentea*, Hylan Blvd. & Arden Ave. LE 11/27/48
 Sumac, Poison, *Rhus vernix*, Travis Ave. FT 3/11/50
 Sumac, Poison, *Rhus vernix*, Range on Staten Island, ER, LE, RF
 Willow Oak, *Quercus phellos*, Page Ave. & Hylan Blvd. FT 6/14/47
 Walnut, Black, *Juglans nigra*, 44" diameter, ER 7/27/46
 Witch Hazel, *Hamamelis virginiana*, Range on Staten Island, ER, LE, RF
 Withe-rod, Naked, *Viburnum nudum*, ER, LE, RF

Cryptogamous Plants

(Abbreviated M for Mosses, H for Hepatics, L for Lichens, D for Diatoms, A for Algae)
 M Aulacomnium palustre gemmiferous, Flagg's Pond, LE 10/15/46, 11/12/46
 H Asterella tenella, LE, RF
 Brittle Fern, *Filix fragilis*, South Ave. FT 9/11/48
 Brittle Fern, *Filix fragilis*, Bloodroot Valley, MW 5/25/46
 M Bartramia pomiformis, Richmond Floral Co. Greenhouse, LE 2/11/47
 Chain Fern, net-veined, Woodwardia angustifolia, Mt. Loretto, FT 10/11/47
 M Cylindrothecium (Entodon) Cladorrhizans, Lambert's Lane, LE 2/11/47
 L Crocynia zonata, LE, RF
 M Drepanocladus fluitans, Lambert's Lane, LE 2/11/47
 D Diatoma vulgare var. brevis (Grunow), Travis Ave., Burke 4/20/50
 Grapefern, Virginia, Botrychium virginianum, MW, RF
 Ground-cedar, Lycopodium complanatum var. flabelliforme, Redjives, RF
 M Leucobryum glaucum, LE, RF
 H Lophozia silvicola, LE, RF
 L Lecidia albocaulerulens, LE, RF
 Maidenhair Fern, Adiantum pedatum, MW, RF
 H Pallavicinia Lyellii, LE, RF
 H Riccia fluitans, LE, RF
 H Riccia sorocarpa, LE, RF
 H Riccia sullivantii, LE, RF
 Selaginella apoda (A fern-ally), MW, RF
 A Staurostrum hystrix, Tysen's Pond, CC 1/25/50
 M Tortula muralis, Old Walls, Willowbrook Rd. ER 3/8/47
 A Tribonema minor, CC, RF
 Wood-fern, Spinulose Dryopteris spinulosa, MW, RF

Zoology

Microtus pennsylvanicus, McCallion 4/15/48, RF
 Opossum, mink, raccoon etc. Polevoy 9/27/47
 Opossum, 4/22/50, Redjives, New Dorp 5/29/50

Amphibia and Reptiles

Hyla crucifer, Mathewson 4/15/48
 Peepers, *Rana sylvatica* (calling), LE 11/27/48, 1/28/50
 Peepers, *Rana sylvatica*, Nesslinger 3/16/48, RF
Rana clamatus, Mathewson 4/15/48, RF
Rana pipiens, Mathewson 4/15/48, RF
 Spotted Red Salamander, *Pseudotriton ruber*, Mathewson 7/1/46
 Spadefoot Toad, Port Richmond, Mathewson 8/28/48

Herbaceous Flowering Plants

Arum, Water, *Peltandra virginica*, So. Shore Golf Course, CC 6/22/46
 Amaranth, Purplish, *Amaranthus lividus* CE 10/26/46
 Arbutus, Trailing, *Epigaea repens*, LE, RF
 Bamboo (Genus & species unknown) VanDyck Property, Howton St., Princes Bay, LE 8/28/48
 Beardtongue, Foxglove, *Pentstemon digitalis*, Drumgoole Blvd. CE 6/28/47
 Blackberry, Cut-leaved, *Rubus laciniatus*, Harbor Pond, Henderson Ave. FT 8/9/47
 Bladderwort, *Utricularia macrorhiza*, Richmond Val. FT 8/14/48
 Burnet, American Great, *Sanguisorba canadensis*, South Ave. FT 8/11/48
 Cancer-root, *Thalesia uniflora*, Palmer's Run, CC 5/25/46
 Cardinal flower, *Lobelia cardinalis*, stand of 44 Princes Bay, Redjives 8/24/46
 Celandine, Lesser, *Ranunculus ficaria*, LE RF
 Clammyweed, *Polanisia graveolens*, Tottenville, CE 7/27/47
 Coltsfoot, *Tussilago farfara*, early blooming, Nesslinger 3/20/48 McCracken 1/28/50
 Cress, Field or Low, *Lepidium campestre*, Wolfes Pond, CE 6/28/47
Dulichium arundinaceum, in bog, 960 Fingerboard Rd. Burke 8/12/47
 Decodon, swamp, *Decodon verticillatus*, Pond, Richmond Valley, FT 8/14/48
 Dandelion flowering in winter, Eltingville, FT 1/14/50
Epilobium hirsutum, Tottenville, CE 7/27/46
Eupatorium Torreyanum, Gansevoort Blvd. CC 10/15/46
 Fleabane, Salt-marsh, *Pluchea camphorata*, South Ave. FT 9/11/48
 Flower-of-an-hour, *Hibiscus trionum*, CE 9/28/46
 Forget-me-not, *Myosotis scorpioides*, Reed's Valley, FT 7/9/49
 Gentian, closed or bottle, *Dasystephana andrewsii*, Eltingville, FT 9/13/47
 Honeysuckle, glaucous, *Lonicera dioica*, Wolfes Pond, CE 6/28/47
 Hops, *Humulus lupulus*, 1167 Rockland Ave. FT 12/2/46
 Hops *Humulus lupulus*, Distribution on Staten Island, LE, RF
 Ladies' Tresses, *Ibidium* sp.? Mt. Loretto, FT 10/11/47
 Man-of-the-earth Vine, *Ipomoea pandurata*, Page Ave. & Hylan Blvd. FT 6/14/47
 Marsh Marigold, *Caltha palustris*, Distribution on Staten Island, LE, RF
 Mint, Round-leaved, *Mentha rotundifolia* Tottenville, CE 7/24/49
 Moccasin Flower, *Cypripedium acaule*, Page Ave. & Hylan Blvd. FT 6/14/47
 Raspberry, black, *Rubus occidentalis*, Distribution on S. I. LE, RF
 Raspberry, Purple Flowering, *Rubus odoratus*, Distribution on S. I. LE, RF
 Raspberry, Purple Flowering, *Rubus odoratus*, Bloodroot Valley, MW 5/26/46
 Rudbeckia triloba, Tottenville, CE 8/13/46
 Toothwort, Cut-leaved, *Dentaria laciniata*, LE, RF
 Umbrellawort, narrow-leaved, *Allionia nictaginea* Tottenville, CE 7/27/47
 Waterweed, northern, *Philotria canadensis*, Clove Lake, LE 11/12/46
 Willow-herb, Purple veined, *Epilobium coloratum*, MW, RF

Marine Life

Barracuda (16"), Mathewson, Gt. Kills, 9/24/49
Beach Shells of Staten Island, MW 4/24/48
Fish killed by hot weather and oxygen deficiency, 2 N. Y. State Localities,
9 24 49
Grass Pike; Rainbow, Brown and Brook Trout, Polevoy 9/27/47
Sea Horse, New Dorp Beach, Mathewson 4/22/50

Insects

Braconid Wasps, ER 1/27/48
Cicada eggs, spring hatching after overwintering, Koestner 8/24/46
Cicada, Tibicen septendecim, Brood 6 emerging 5/22/49, singing 6/17/49
Gladiolus Thrip, St. George, ER 9/16/47
Lantern Flies, Orenis septentrionalis, CC 8/12/47
Norway Maple Aphids, ER 8/27/46
Odynerus sp.? 3/16/48, ER, RF

Ecology

Flora of Buck's Hollow, Latourette Park, ER, RF
Oak Wilt, Chalara quercina, Bull. N. Y. Dept. Agric. 1/5/50
Six-month species survey of birds, Kissell Ave. MW, RF

Mineralogy, Paleontology, Meteorology

Epsomite on serpentine, Todt Hill, Coles 10/22/49
Fossils of Clay Areas, including Foraminifera, Burke 4/22/50
Granite Boulders from dredging St. Geo. Ferry slip, Coles 3/25/50
Granite Boulders from dredging Arthur Kill, Carteret, LE 4/22/50
Hardness Catskill Water, Burke 11/27/48
Hardness Pumping Station Water, Burke 11/27/48
Limonite in Quartz, Coles, RF
Morainal material, Bedford Ave., Grant City, Coles 5/22/48
Pipelike concretions, Claypit Charleston, FT 9/14/46
Pond Deposits at 15 ft., Basket Willow Swamp, Burke 11/27/48
Snowstorm with lightning, Hoffmeyer 1/5/47

The Little-known World of Eyesight

PERCY A. LEASON

(Center of interest in the gallery this month is Percy A. Leason's one-man show, a collection of distinguished paintings by an outstanding artist who is a resident of Staten Island.

The paintings themselves set forth Mr. Leason's artistic creed better than words can do; but in the course of the years of thought and experience which have resulted in that creed, he has inevitably formulated it also in words and can give a reason for the faith that is in him. He has recently written an article in which he outlined his artistic principles at length. Although it is impossible to present the full article here, Mr. Leason has been kind enough to permit us to use a few paragraphs, which will be of interest when read in connection with a visit to the show which is now hanging on the walls of our gallery.

Editor)

“* * * This is the simple answer to the question as to what the eye conveys to the mind: it conveys a pattern of shaded and colored patches. And nothing more than that. It knows no more of external objects or of their environment or doings and relation to each other than does a camera, or the projection machine in a movie theater. All knowledge of external objects that is given to us in the data of optical images, begins with the mind. It begins with the reading of the pattern of colored and shaded patches by the perceptive faculty.

“This in turn brings up another important question: whose perceptive faculty shall be deemed the fit and proper one to read optical data with authority? The answer boils down to this: that of the person whose perceptive faculty has the greatest experience behind it, since it is only by relating past experience to the present data that we can hope for a reliable reading. * * *

“This means that we must turn to many individuals, not one; to specialists in the various aspects of reality. * * *

“Now if we continue in this way, we are bound to come to these questions: what special aspect of reality is reserved for the painter, and to which aspect can he turn to fulfil the moral function of his art in removing prejudice, in tearing away veils due to wont and custom, and in order to perfect his power to perceive?

*** he will come to realize that truths found in one aspect of reality conflict with those of another when he tries to express them in his picture. For example, if he chooses a bird for part of his subject matter and seeks to perceive and express ornithological truths, he will find as Audubon may have found, that he has outraged the relationship of visual truths. If he seeks out minute details of feathers, he cannot have the visual effect in which details are lost in deep shadow, bright light or merging edges.

"Or take another example: if he paints a tree, he must, in order to avoid conflict, decide whether his aim is to perceive and express related botanical truths, or the related truths of proportions, tones and colors which will give the effect of brilliant sunshine on a tree. He cannot have both, for the effect of sunlight, especially in the shadows, will confuse the botany of his detailed leaves: on the other hand, his highly detailed leaves will destroy the effect of sunlight.

"If however, he chooses to try and combine botany and the particular visual effect, it will be obvious that he can only do this by compromise, by ignoring something of both. But will he not in this way be failing to perfect the power to perceive, and thus placing himself in danger of remaining unaware of the real botany, and in turn, of the real visual effect? If this becomes his wont and custom, will he not now be developing prejudices, scales and veils for those influenced by him—for those people who have eyes for his painted trees, and seldom, if ever, for those of Nature? Surely it is nothing better than this that makes some people prefer the detailed trees in—let us say—work by Botticelli, Rousseau or Grandma Moses and dislike those in paintings by good visual realists. ***

"I submit that the answer to our question—what special aspect of reality is reserved for the painter—is this: the little-known and infinite visual aspect of the external world. Throughout its long history the art of painting has been moving slowly towards this."

Exhibition of Children's Paintings

GERALD BERNSTEIN

On January 6 the nineteen children in Mrs. Lola Landry Gerow's drawing and water-color class opened their first exhibition of the year. Each student is represented by at least one painting. These drawings and paintings really represent the children's own efforts. Criticism or help given by Mrs. Gerow is always given in the sketchbook which each student possesses, and never directly on the drawing, so that the finished product is honestly representative of the child's own skill and imagination.

Children are natural inventors. With encouragement they will create works of art as readily as they will, if unrestrained, create a rumpus. Interesting designs, harmonies of color and imaginative subject matter come from the child with an uninhibited ease. Best of all, the child brings to us with his art a fresh view of the world around him. Teaching art to children is not merely a process of showing one's skill to the child for copying purposes. The good teacher brings forth, encourages and develops what is already inherent in the child. The present exhibition evidences the natural abilities of children, and also the way in which such abilities are properly channeled by the teacher. Visitors have shown much interest in the great variety of subjects and the novel methods of transmitting ideas. Notable also is the directness of approach which we so often find in children's art but seldom in the highly publicized exhibitions of professional painters. Subject matter includes landscapes, still lifes of fruit and flowers, studies of trees and birds, "copies" of the animals in the science collections of the Museum, and pictures inspired by Thanksgiving and Christmas. They will remain on exhibition throughout the month of January.

The following are the young exhibitors:

Eleana Asselta	Salvatore Messina
Jill Carter	Frances Mintz
Francis F. Denzler	Jerold Nachison
Clara Duckworth	Gerry Reiskind
Robin B. Garig	Arthur Siegel
Paul Gianfagna	Charles A. Stiles Jr.
Ann Gwynne	Carole Vorgang
Doris Ann Hutton	Elizabeth S. Wallace
Helen Hutton	Lynn Ward
Michele Latanzio	Robin Ward

The Census Looks at Staten Island

Part II

ROSWELL S. COLES

Part I of "The Census Looks at Staten Island" examined some facts relating to Staten Island population, including growth, population shift, heterogeneity and age. Part II will continue with information about education, housing, and political complexities.

I

EDUCATION

Questions relating to education are some of the most provocative facing our community. As with the term "democracy," everybody agrees that education is good, but we differ greatly as to the nature and extent of its goodness, and how best to achieve it. Consequently we are faced with fundamental problems, many of which are qualitative in character and beyond the scope of this article. However, we may properly consider three aspects directly related to the census, all revolving about a central theme: "How much Education do we Need?"

The first concerns the number of years we expect our young people to stay in school. Compulsory education is in one sense an anomaly in a democracy, based on the perhaps untenable supposition that since a democracy needs an educated citizenry it can create one by compulsory school attendance. Nevertheless we generally look upon the number of years of compulsory schooling as an index of civic success.

A recent issue of *News and Cues*, published for the Committees on Education by the Chamber of Commerce of the United States, points out:

"Some states require 50% more schooling for children than others. According to a U. S. Office of Education survey, seven states demand eight years, 33 states nine years, four states, Maine, Michigan, North Dakota, Utah) ten years, three states (Nevada, New Mexico, Oklahoma) 11 years and one state (Ohio) 12 years.

"Only three states require attendance at age 6, 36 states at age 7, and 9 states not until age 8.

"To be exempted from school attendance without going to work, young people must have completed high school in 15 states, but only elementary school in 21 states.

"Children can get work permits as early as age 12 and 13 in some states, with only the requirement that they be

literate. Most states make 14 the earliest age for work permits. Some require high school graduation before granting them."

The question is then raised, "What are your state's requirements? Should they be revised?"

The New York State Law requires attendance from age 7 to 17. It permits working papers for part time work at 14 and full time at 16 with certain requirements for continuation school attendance. If a child went to school for the required 10 years he would complete his sophomore year in high school.

Let us assume that this number of years is adequate, a qualitative question we should not try to answer here. What then is the level of education of Staten Island? Here are the 1940 figures. We hope the 1950 figures will show a considerable increase:

<i>Years</i>	<i>Total</i>	<i>Number attending school</i>	<i>Per cent</i>
5 years	2,398	890	37.1
6 years	2,336	2,102	90.0
7 to 9 years	7,952	7,788	97.9
10 to 13 "	12,209	11,981	98.1
14 years	3,086	3,007	97.4
15 "	3,155	3,075	97.5
16 & 17 years	6,361	5,183	81.5
18 & 19 "	6,839	1,911	27.9
20 years	3,308	362	10.9

It is submitted that the 18.5 per cent of 16 and 17 year olds and the 72.1 of the 18 and 19 year olds who do not complete the requirements present a problem in which we all might be concerned.

A more serious problem arises from the fact that the older our citizens are the less schooling they are likely to have had. Here are the 1940 figures for those of us 25 years of age or older:

<i>Years of School Completed</i>	<i>Number</i>	<i>Per cent</i>
No school years completed	3,829	3.7
Grade School: 1 to 4 years	5,246	5.1
5 or 6 years	7,031	6.8
7 or 8 years	48,600	47.1
High School: 1 to 3 years	15,324	14.9
4 years	13,137	12.7
College: 1 to 3 years	3,530	3.4
4 years	5,321	5.2
Not reported	1,149	1.1
	108,167	100.00

Of these 108,167 persons the median school years completed is 8.4 or about that of the seven states with the lowest legal requirement and about four years less than is required for the high school diploma we hope for.

However, we find that in 1940 87.3 per cent of our Islanders have not completed high school. Not only that, 52.9 per cent have not completed even grammar school. And we might note that while 5.2 per cent of our population completed four years of college, 3.7 per cent completed no school years at all.

One other fact needs to be considered. The median school years completed is, as we have seen 8.4. However, this is derived from the following: Native born Whites, 8.8; foreign born Whites, 7.7; and Negroes 7.9. But of these groups only 2.2 per cent of native born Whites completed less than five years while the per cent for foreign born Whites and Negroes is 21.6 and 19.5 respectively.

From these probably dry statistics we begin to see a Staten Island emerging which needs much, much more education than it has received. If to this we add the special needs of such groups as the older adults, crippled, sightless or otherwise handicapped persons, we find a problem worthy of our best attention.

It is in this field, generally known as adult education, that institutions like our museum can be of inestimable help. We can and do provide numerous opportunities for adults to get together and learn.

Also, among the Island's other institutions, including the adult evening centers operated by the Board of Education and the Wagner College evening sessions, are facilities to meet at least some of our pressing educational problems.

II

HOUSING

There are two main problems relating to housing. The first is immediate and urgent, "Is there sufficient housing to care adequately for our population?" And since the war and post-war years have clearly demonstrated a lack of adequate housing no examination of pre-war census figures can serve much purpose.

The second problem has even more significance. What happens when a community moves from single family to multiple family dwellings?

Taking the island as a whole, the 1940 census shows that most of us still live in one or two-family dwellings:

1 family detached	27,014
1 family attached	711
2 family side by side	1,108
2 family other	12,086
3 family	1,566
4 family	1,184
1-4 family with business	2,660
5-9 families	937
10-19 families	395
20 or more	1,080
other	98

The number of rooms in these dwellings may also be of interest :

1	419
2	1,123
3	5,283
4	9,350
5	10,629
6	11,271
7	4,762
8	2,234
9	910
10	653
11 or more	737
not reported	468

One of the aspects of Staten Island which gives it a somewhat unique flavor is the number of large old houses still standing. Some of these go back nearly to the time of our first permanent settlement, more are of Revolutionary war period, many are of Mansard roof design.

1935-40	1,279
1930-35	2,884
1925-29	8,408
1920-24	7,911
1910-19	8,266
1900-09	5,657
1890-99	3,600
1880-89	1,738
1860-79	1,402
1859 or earlier	1,033
not reported	6,661

As might be expected, Staten Island is to a considerable extent historically minded. A very active historical society, Mr. Loring McMillen, director, has documented most of the older houses and is actively engaged in the preservation of many.

The 1940 figures for monthly rental probably have little significance in dollars but the ratios presumably still hold.

All occupied units		43,076
under \$5.00 per month	34	
5-9	154	
10-14	895	
15-19	2,355	
20-24	4,519	
25-29	5,897	
30-39	10,764	
40-49	7,789	
50-59	4,683	
60-74	2,789	
75-99	1,368	
100 and over	919	
not reporting	910	

There were, in 1940, 3,067 seasonal dwellings, mostly summer cottages occupying the South Shore from South Beach to Tottenville.

These statistics, however, are not the whole story. We need no census to note the development of apartment houses on the North Shore and now increasingly in other nearby areas. In some cases vast woodland areas have been leveled to create extensive apartments.

The post-war period has also brought to our Island three large apartment units erected and operated by the New York Housing Authority, non-slum-clearance and non-subsidized.

It is submitted that, by and large, apartment dwellers have a different viewpoint from the home owner, or even the renter in a two-family house. Apartment dwellers are once removed from many of the community problems which must be the concern of a home owner: taxes, city services, insurance rates for fire, public liability, theft. Further, many private apartments provide little or no play space for growing youngsters, or for adults either, for that matter, to use time and energy which in other domiciles might well be spent in constructive activity in the house, yard or garden.

There is a direct correlation between adequate housing and good citizenship. But "adequate" means much more than just the safety factors. Our laws relating to the physical structure of our multiple dwellings are quite strict in New York City. But we continue to put up private apartments with inadequate facilities for the building of good citizens, certainly as serious a community problem as a lack of adequate fire protection.

Whatever we may feel about public housing, it is to the credit of the Housing Authority that adequate play and recreation space has been provided in its Staten Island projects.

Much needs to be done to bring our concepts of living in multiple dwellings up to date and to create the basic conditions for successful community living.

III

SOME POLITICAL CONSIDERATIONS*

At a time when our democratic way of life is in jeopardy, it is painful to realize that so few of us pay any attention to the corner stone of our system, politics. In fact, too often politics is considered a sort of necessary evil, rather than a civic duty. In a struggle with totalitarianism, somehow we must put our house in order. Let us

* See: *Guide to The Municipal Government of the City of New York*, by Rebecca B. Rankin, Librarian, Municipal Reference Library, New York City.

look at a few aspects of our local political situation. Here is the 1940 analysis of our 115,820 population 21 years of age or over.

	<i>Per cent</i>	<i>Number</i>
Per cent Citizen	91.4	105,841
Per cent Alien	8.6	7,869
Not reported		2,137
<i>Citizen</i>		
White—Native	75.0	79,405
Naturalized	22.8	24,156
Negro—Native	2.0	2,121
Naturalized	0.1	54
Other races—Native	0.1	78
<i>Alien</i>		
White—First papers	25.0	1,964
No papers	73.5	5,783
Negro—First papers	0.2	13
No papers	0.8	61
Other Races—Foreign Born	0.6	48

Note that nearly 10 per cent of the population of voting age was alien, that only 75 per cent of our citizens were native white, and only about one fourth of our aliens had taken out first papers. Then remember that in our section on education we found that 21.6 of our foreign born whites have completed less than five years of schooling. We can no longer think of ourselves as a traditional, alert, cohesive, public spirited citizenry, but rather a very complex, imperfectly trained, heterogeneous group.

The reason for our disinterest in civic duties becomes evident when we examine the political system under which Staten Islanders live. I suppose that residents of other boroughs most often think of Staten Island as a remote, simple, rural area. In reality, politically at least, it is very complex. Apart from the United Nations we live under six actual or vestigial political divisions. Here are the four most local:

The County: The County of Richmond was established in 1683 by the English Governor, Thomas Dongan, and named for one of the sons of Charles II, the Duke of Richmond. The village of Richmond was the county seat from 1729 to 1917 at which time the offices were moved to St. George.

Because of our large number of semi-separate residential or business areas such as Tottenville or Mariners Harbor the Island

still appears to be more like a county than a borough of the City of New York and we would do well to remember this fact. However, the functions of the county have been altered greatly by Consolidation, the Home Rule Law of 1923 and the Charter of 1930. About all that is left is the county court. This situation is not too important except in the case of State moneys for educational and other purposes which ordinarily would be allocated on a county basis. In the case of the New York City counties the administration is through the City itself. In a recent case State funds available for youth work were denied Richmond County because the City Youth Board felt that there was a greater need elsewhere in the city, a fact no one could deny. However the same argument could doubtless be made for nearly every county in the State, yet funds were available for other counties. Apparently the only way Richmond County can receive State money for youth activities is to show a higher delinquency rate than other New York City sections.

Towns and Villages. The interesting history of our towns may be found in Leng and Davis' *Staten Island and Its People*. Towns and villages as political units were wiped out by Consolidation in 1898. However, they do exist geographically, and continue to be important in our thinking. Local loyalties interfere at times with necessary borough-wide action. Local interests must often work through non-political groups such as a Board of Trade, Civic Association or the P.T.A., exerting influence on a remote governmental agency. How different was political action, for example, when the village of New Brighton had its center in the old village hall on Lafayette Street.

Here is a 1947 estimate of our local population by the Post Office, published by the Chamber of Commerce:

<i>Town</i>	<i>Population</i>
Annadale	2,424
Charlestown	400
Eltingville	2,200
Great Kills	7,848
Huguenot	1,548
Mariners Harbor	10,532
Midland Beach	3,040
New Dorp	14,560
Richmond	1,500
Oakwood Heights	2,396
Port Richmond	35,012
Princes Bay	5,184
Rosebank	19,152
Stapleton	24,028
Tottenville	7,228

<i>Town</i>	<i>Population</i>
West New Brighton	25,320
St. George	2,784
Castleton Corners	2,004
New Brighton	16,908
Tompkinsville	18,164
Grymes Hill	844
Travis	1,548

The City of New York: The Greater City of New York was established by the Charter of 1898, with five boroughs geographically coextensive with the five counties. Staten Island continued to be the County of Richmond with county officials and county representation in the State Legislature. County taxes were collected by city officials and county expenses paid by them thus eliminating the need for a county treasurer and town supervisors. Towns became wards: 1, Castleton; 2, Middletown; 3, Northfield; 4, Southfield; 5, Westfield.

Thus some 67,000 Staten Islanders became, with a stroke of the pen, citizens of one of the largest cities in the world. Today the city is a great world capital with nearly eight million inhabitants, more than the total inhabitants of 41 of the 75 nations of the world.

Now if you take a young country fellow and set him down in the middle of a big city—well, that is what literature is made of. But here *we* are, with 200,000 of the 8,000,000 City population, still with woodland areas large enough in which to get uncomfortably lost and still separated by that five miles of water from the rest of the city.

The *Little Green Book* for 1950 lists some 102 separate departments, courts, offices with 167,348 employees (not counting employees of City owned transit systems, the 42nd Street Public Library, Grant's Tomb, etc.) While the form of the city remains a mayor and council type its size demands that a great deal of the city's work must be conducted in departments with appointive heads, with considerable administrative authority. Miss Rankin's *Guide* takes 166 pages just to describe briefly our complex city government.

The Borough: At the time of Consolidation the Borough became the local government. But with the new charter of 1936 the powers of the Borough government were much reduced and the centralized departments became that much more important. The Borough President's office now concerns itself largely with the construction of highways, small sewers, public baths and comfort stations and the major city business is carried on by the larger centralized departments.

We see, then, a Staten Island with citizens in many cases badly equipped to carry on a democratic government being forced by a

combination of circumstances to function as an isolated fragment of a great centralized municipal government. Those of us whose work is concerned with both people and the city know how difficult the situation is.

To all this might be added some remarks about the State and more especially the vast changes in the Federal Government. But this would only add fuel to a flame already too hot for most of us to control.

In conclusion, an interesting attempt to compare various districts of New York City through an examination of population statistics has recently been published by the Greater New York Fund in a pamphlet, "Our Welfare Needs." Staten Island figures are difficult to interpret because of the extreme variation within our boundaries. However, the figures do, in a general way, compare us with 40 other areas in the City. Here is part of the findings:

Total Population, 24; Distribution of family dwelling units, 23; Distribution of Catholic population, 37; Distribution of Jewish population, 5.5; Distribution of Protestant population, 26; Population change 19.5, and composite index 27. As a comparison, Woodhaven ranked first; the Rockaways 2; Jackson-Heights-Corona-Elmhurst was 41 and Riverside in Manhattan 40.

Population density, 2; density of families 1; distribution of negro population 25.5; foreign born white population, 10.5; ratio of females to males, 37.5.

The Rockaways rate 1 in population density; Bayside and Douglaston 2; Washington Heights 41 and Riverside 40. Density of families shows Bayside 2; Hollis district 3; Lower East Side 41; Riverside 40; distribution of Negro population, Maspeth-Ridgewood ranked first, Harlem 4; Bedford-Bushwick 40. Of foreign born whites, Harlem had the fewest; Lower East Side the most, 1-41; Ratio of females to males was lowest at Kips Bay; Manhattan 1; Riverside 2; Lower West Side 40; Lower East Side 41; In the composite sub-index Lower East Side, Manhattan was 41; Lower West Side 39.5; Brownsville, Brooklyn 38; Woodhaven 1; Hollis district 2; Staten Island 10.

There are several other comparative studies in this provocative pamphlet but we may conclude this section by considering the Staten Island sub-index of social pathology: neglected children, 33; delinquent children, 28; juvenile apprehensions, 28; truancy investigations, 6; family court cases, 40; and composite sub-index, 27.5.

Our Collection of Portraits

As usual, last summer, a selection from the Museum's permanent collection of paintings was shown in the gallery and the exhibition room; and this time, the selection was from our collection of portraits. Despite the fact that most of the subjects probably were as unknown to the average visitor as the tintypes in Great-grand-mother's album, and many of the artists also are unknown, this room proved so steadily attractive as to suggest that the following list of all our portraits at the present time may be worth while not only as a matter of record, but for its interest to students of portraiture.

<i>Subject</i>		<i>Artist</i>	<i>Date</i>
Bayne, Hon. Howard R. (1851-1933)	Oil	- - - Boynton(?)	Unknown
Barger, Henry	Oil	Unknown	18—
Barger, Matilda	Oil	Unknown	18—
Britton, Alexander Hamilton (1811-1882)	Oil	Giuseppe Fagani	Unknown
Britton, Nathaniel (1755-1843)	Oil	Under investigation. (Possibly Daniel Huntington?)	Unknown ca 1940
Callisen, Adolph A.	Pastel	Constance Wingert	ca 1940
Davis, William T. (1862-1945)	Pastel	Constance Wingert	1942
Davis, William T.	Oil	Percy A. Leason	1944
Harrison, John Talbot, M.D. (1785-1863)	Oil	Unknown	Unknown
Kreischer, Caroline Haenchen (—1850)	Oil	Unknown	18—
Kreischer, Balthasar (1813-1886)	Oil	B. Wiebking	18—
Kreischer, Clara Hoff	Pastel	Wiebking	1865
Kreischer, George F. (1846-1901)	Oil	Unknown	Unknown
Kreischer, George and Frederica	Oil	Unknown	18—
Kreischer, Henry	Oil	Wiebking	1875
Kreischer, Louise	Crayon	Unknown	Unknown
Kreischer ———	Oil	Unknown	Unknown
Kreischer, Matilda Zumberger	Oil	B. Wiebking	1875
Lecoq, Marie Louise	Oil	Unknown	Late 17th Century (?)
Luyster, Katherine Britton (1812—)	Oil	Unknown	Unknown
"Mother"	Oil	Adeline Albright Wigand	19—
Prall, Edwin T.	Oil	Unknown	Unknown
Prall, Rachel Moore Thompson	Oil	Unknown	Unknown
Shaw, Anna (later Mrs. George William Curtis)	Crayon	Samuel Lawrence	1855
Tompkins, Daniel D. (1774-1825)	Oil	Unknown	Unknown

Tompkins, Five Children of			
Daniel D.	Oil	Ezra Ames	1809
Turner, Anna	Oil		
(1795-1889)		Unknown	Unknown
Wigand, Otto C.	Oil	Adelaide Albright Wigand	Unknown

Sculptures and Casts

Dreyfus, Louis A.	Bronze		
(1867-1920)		Unknown	Unknown
Low, Daniel	Marble		
(1792-1876)		Hiram Powers	1869
Tompkins, Daniel D.			
	Plaster, bas relief	Unknown	Unknown
Prall, William	Plaster, bas relief	Unknown	Unknown

Literature Relating to Staten Island

McCulloch Musings. By Rev. George D. McCulloch, D.D., Ernest C. McCulloch, M.D., and Robert B. McCulloch, M.E.

This modest booklet presents poems by three generations of the McCulloch family. Dr. E. C. McCulloch is not only a member of the Staten Island Poetry Society, but also of the Belles Lettres Society; and his son Robert, who now lives in Colorado, was one of the boys who used to hike from the Museum some years ago. It is not often that the poetic impulse persists so strongly in a lineal descent. In this case, it is interesting to note that the characteristics of clearness of thought and simplicity and straightforwardness of expression also seem to be inherited. This reviewer's choice, perhaps, is "Highways and Byways," by Dr. McCulloch. The booklet is prefaced by a genealogy of the family.

"The Traitor, who Might Have Been President." By Lucile Coleman. In *Chromatones, a Quarterly of New World Poetry*, published in California.

Mrs. Coleman, founder of the Staten Island Poetry Society, is represented in Volume 4, No. 3 of this *Quarterly* by a poem inspired by the demolition of the old St. James Hotel at Port Richmond, where Aaron Burr died.

Peter's Neighborhood. By Elizabeth Pinney Hunt.

Mrs. Hunt, though no longer a resident of Staten Island, is a descendant of an old Staten Island family. As a child she lived at 3 St. Mark's Place, not far from St. Peter's Church, hence, no doubt, the title of the book. One of the poems is entitled "St. Mark's Place," and describes incidents in the life of a family living on that street.

History of Beacon Light Lodge No. 701, F. & A.M. Compiled by John P. Searl, with an introduction by James E. Thomson.

This volume is what its name indicates, the history of a Masonic Lodge on Staten Island. It was published to celebrate the 80th anniversary of the Lodge; and besides preserving the annals of the organization, it is a definite contribution to general local history.

"Rocket Research in the Twentieth Century." By Joseph W. Siry. In *The Scientific Monthly*, December. (Vol. LXXI, No. 6).

This article contains an illustration showing the launching, on May 14, 1933, from a Staten Island beach, of the first rocket flown by the American Rocket Society. Mr. Siry, of the Naval Research Laboratory, covers his subject from the powder-filled rocket of 1900 to the missile which on February 24, 1949, reached a velocity almost seven times the speed of sound, when fired from the White Sands Proving Ground in New Mexico. Between those dates research and experiment have been carried on not only by the Government but by the American Rocket Society, an organization formed to stimulate interest in rockets. Static tests were made at various points in New Jersey and Westchester, and flight tests were made on the Staten Island shore of the Lower Bay.

M.A.

Institute Notes

Davis Memorial Lectures. The lecture season opened with a fine presentation of colored motion pictures entitled "Japan Journey," by Karl Robinson on November 18 at McKee High School.

Annual Christmas Concert. Our concert was held at McKee High School on December 16 and beautiful music, appropriate to the season, was presented by the Staten Island Oratorio Society, the Treble Choral Ensemble, The Staten Island Chamber Music Society, Miss Margaret Graves, violin, of the Richmond Institute of Musical Art, and George Martin, piano.

Further lectures to be given include:

- Jan. 20, 1951—"Safari in Africa," by Murl Deusing.
- Feb. 17 —"Algeria," by Clifford J. Kamen.
- Mar. 17 —"Valley in the Clouds," by Nicol Smith.
- May 19 —"The Universe of Palomar," by Dr. Ruroy Sibley.

Annual Christmas Bird Census. On December 30, under the leadership of Casimir Redjives a group of bird-lovers surveyed the Island from sunrise to sunset.

Stamps. The annual stamp exhibit of the Philatelic Society will open February 4 and continue throughout the month. Emphasis this year is being placed on new exhibits, and on educational value. The show will be divided into three classes: stamps covered by Part I of the Scott Catalogue; stamps included in Part III of that catalogue; miscellaneous items.

The Section of Handcrafts will hold its third annual exhibit of "Crafts for All Ages" during the month of March in the gallery and exhibition rooms of the Museum. This exhibition is open to all Staten Island craftsmen and women and organizations doing craft work.

Microscopy. On April 21 the Institute's annual Science Exhibition will be held at the S. I. Day School. This provides an opportunity for members of the S. I. Microscopical Society, Wagner College, Island high schools and public institutions and individuals to show, through varied and interesting displays, work and research being carried on in the field of science on Staten Island.

Woman's Auxiliary. The Annual Dessert Bridge, which for years has proven a highly successful affair both socially and financially, will be held again this year on Thursday, May 10, at the Boulevard Hotel, Grant City. The proceeds of this affair enable the Woman's Auxiliary to make their generous donation to the Museum each year so we hope that everyone will save this date to meet with friends in the interests of the Museum.

The Camera Club plans again to sponsor beginning courses in elementary photography, under the direction of William Hunn, for the Spring Term, 1951.

Our Artists. The following members of the Museum's Section of Art have showed their work in Manhattan galleries recently:

Miss Setta Solakian, 96 Tompkins Circle, held a one-man show of her oil paintings at the Argent Galleries, Manhattan, in October. Miss Solakian was born in Constantinople. This was her first one-man show, and included landscapes, flowers and figures.

Reinhard R. Tacke, 1263 Richmond Road, had a one-man exhibition of oil paintings and woodcuts in the George Binet Gallery, 67 East 57th Street, Manhattan, in December. Mr. Tacke was born in Berlin, and studied under his father and at the Academy. After imprisonment, and separation from his wife and child, he eventually succeeded in reaching America with them, and has made his home on the Island. Several of his works are in European and American collections, and he has also exhibited throughout this country.

Cecil C. Bell, of 17 Tompkins Circle, was one of 300 whose work was selected in a nation-wide competition for exhibition this winter in the Metropolitan Museum of Art. The selection was made from more than 6,000 entries from all over the United States. The chosen paintings are now on exhibition at the Metropolitan. Mr. Bell was born in Seattle, Washington, and studied in Chicago at the Art Students League with John Sloan and Harry Wickey. He had a one-man show in the Staten Island Museum's gallery in 1946.

New Members

We welcome the following new members who have joined us since the date of our last Proceedings:

Thomas A. Bannon	Mr. and Mrs. James Macpherson
Miss Caroline Beavis	Arthur Martens
Mrs. Fannie L. Beecher	John C. Mauro
Mrs. Louise Caola	Mrs. Lena Moore
Mrs. Lucile Coleman	Mrs. H. P. Nielsen
Francis A. Current	John A. Noble
Sal Di Franco	Richard A. Rogers
Mrs. C. P. B. Egbert	Miss Marie M. Sabater
Miss Genevieve Gaynor	Mrs. Raymond Safford
Mr. and Mrs. Ralph Goesle	Lee B. Sharp
Alexander Gonzales	Rev. Clement E. Suemper
Sidney Heymann	Mrs. Tessida Swinges
Miss Alice Marie Koeth	Hollis E. Taylor
Ernest Kopacska	Mrs. Mary C. Triano
Stephen Lakatos	Mrs. Hattie S. Waldo
Frank Lomassaro	Thorley B. Wetlesen

Necrology

Hiram C. Horton, a leader in the field of savings and loan associations on Staten Island for half a century, died on Saturday, October 21, at his home in Westerleigh. Mr. Horton was eighty-eight years old, but had remained active until the day before his death. He came to the Island in 1890, as principal of the school at Pleasant Plains. He gave up teaching to enter the publishing business, but later concentrated entirely on savings and loan work, and real estate and insurance. He had been a member of the Staten Island Museum for more than thirty-one years.

Clermont C. Covert, until last year a resident of Staten Island, and a member of the Museum since 1943, died December 11 at his home in Binghamton, New York. Mr. Covert, a civil engineer, spent several years with the government, surveying watersheds in the United States and Canada. While living on the Island, he was in charge of the Manhattan office of the W. & S. E. Gurlie Company, manufacturers of civil engineering equipment. He also lectured on his subject at colleges and universities. He was heard at the Museum a few years ago, on his work and experiences in Alaska.

Miss Agnes C. Nash, who was on the staff of the Museum in the Art Department from 1929 to 1943, died in Everett,

Massachusetts, in October. Miss Nash directed classes in painting and sculpture at the Museum, and was herself a frequent exhibitor. Since her retirement she had been living in Massachusetts. Some time ago she met with an accident and broke her hip, but was believed to be recovering, when a heart attack proved fatal.

Mrs. Ramona Crampton Michener (Mrs. Howard P. Michener), of 298 Lighthouse Avenue, Richmond, died December 22, after a long illness. Mrs. Michener had been a member of the Museum for six years. She was an artist and exhibited her work several times at the Museum.

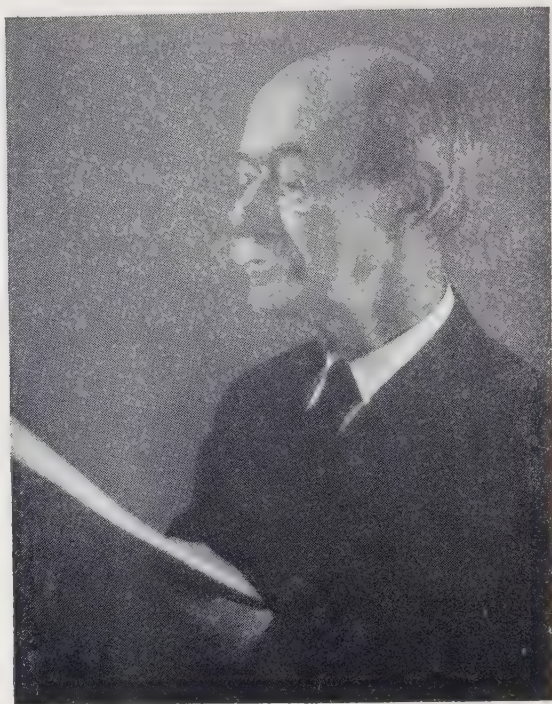
Accessions

Noteworthy among the gifts received since those noted in our last Proceedings, is that of Mr. Edward L. Love, who has presented to the Museum two fine oil paintings by Percy A. Leason. —“Three Sisters” and “Corner of the Studio.” These are a valuable addition to the Museum’s permanent collection.

Another interesting gift is from Daniel L. Bridgman, —the Poems of William Winter, in a limited edition, 1909, with inscription.

Donors

Paul Wilke	Johnny Johnsen
Dr. Sam A. Lewin	William Bradford
Staten Island Historical Society	Charles Ericson
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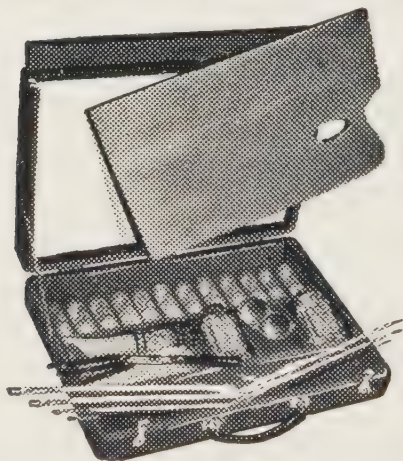
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PROCEEDINGS of the
STATEN ISLAND INSTITUTE
of ARTS and SCIENCES



VOLUME XIII

NUMBER 3

April, 1951



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The new car market is tight. The used car market is mixed. No one can foretell whether or not the necessities of the future will dry up the flow of new cars and cause a drastic reduction in auto agency employees. The situation is fluid and can become critical in both new car purchases and in the servicing of existing models.

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PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES. Vol. 13, No. 3, April, 1951. Published Quarterly in October, January, April and July, by the Staten Island Institute of Arts and Sciences, 75 Snodgrass Place, Staten Island, N. Y., and entered July 20th, 1918 as second class mail matter at Staten Island, N. Y., under the Act of August 24, 1912. Subscription price \$1.00 per year, included in annual membership fee of \$3.00. Mabel Abbott, Editor.



"WARD'S HILL."

Oil painting by Hans Glinicke, in Annual Spring Exhibition.

Cladophora on Staten Island

I. C. G. COOPER

Cladophora is one of the largest genera of algae and is widely distributed throughout the world. It occurs in salt, brackish and fresh waters. Despite earlier records of several salt water species having been found on the shores of Staten Island,* the writer does not know of one station where marine forms can be collected here. Until recently only one location of a growth of a fresh water species was recorded.

Cladophora Kuetzingiana was found in 1939 growing on the artificial waterfall northwest of the upper dam in Clove Lake Park. That spot is the only known station where the alga has a continuous record and remained the only record until Mr. Lee A. Ellison brought in a small plant of the same species from Corson's Brook on November 30, 1948.

This species loves well-aerated and running water, consequently it cannot have a wide distribution here. Discovery of a new and vigorous growth almost at my door was of particular interest.

Late in the summer of 1949 the writer noticed a greenness in the bottom of the streambed where a tributary of Palmer's Run crosses Bidwell Avenue between Waters Avenue and Watchogue Road. This was in small patches, very torn stubs of the plants remained and identification was uncertain. A close watch was therefore kept in 1950.

Something should be said about the waterway itself. Twenty years ago Palmer's Run was a goodly natural stream running all the way from south of Todt Hill to Port Richmond with a spot north of Victory Boulevard with sufficient water in it to build an "old swimming hole", which was quite popular in summer. Today this streambed is dry south of Watchogue Road except in periods of heavy rain. The side tributary was also a natural brook running from the location of the new Todt Hill Housing site, across Manor Road between Schmidt's Lane and Long Avenue into a culvert which now extends to Meiers Corners. It emerges into a built-up channel on the south side of Victory Boulevard at Wheeler Avenue and at the foot of Bradley Avenue crosses under the road into a garden. It winds in a natural way behind the houses on Watchogue Road to No. 190, passes under the road in a built-up channel and bends west in a straight line from Demorest Avenue until it flows into Palmer's Run at Woolley Avenue. This brook in its natural state up to 1933 was alive with crayfish, salamanders, frogs, minnows, water striders, etc. and was, in spots, still primitive. W.P.A. straightened it and built up stone rubble walls with a concrete bottom through the developed area. Life died out.

The stream's source was a spring. This has been filled in with clay excavated from the housing project, but the water still appears from beneath the clay now on the north side of Schmidt's Lane in the low ground there. During 1950 there was always some water flowing. In the spring the water was always heavy with clay but at the end of May it became clear and the alga began to grow rapidly. The first collection was made June 11, 1950 and by June 17 the plants were up to 5 inches long. Whenever rain fell in any quantity the plants were torn loose and re-growth commenced from the rhizoidal base portions which found good hold on the rough surface of the concrete bottom of the channel.

A search was made to find the highest incidence of the plant in the stream. This was found in the natural part of the brook behind 104 Watchogue Road as a small fringe around a boulder in the earthy streambed. Between this point and 190 Watchogue Road a few other fringes were found where the water rippled around stones. In the built-up portion good growths were found almost continuously down to Bidwell Avenue and then thinned out toward Livermore Avenue and Palmer's Run. Examination of the Manor Road area showed no occurrence there.

At one time there was another sizable branch of this stream flowing from the old iron mine site east of Jewett Avenue near Crowell Avenue. This was found to be dry and in many places filled up. The tributary is now the only source of daily flow into Palmer's Run south of Maine Avenue. Due to the fact that Palmer's Run is wider and irregular, several pools in it are stagnant and the alga has no foothold in that streambed.

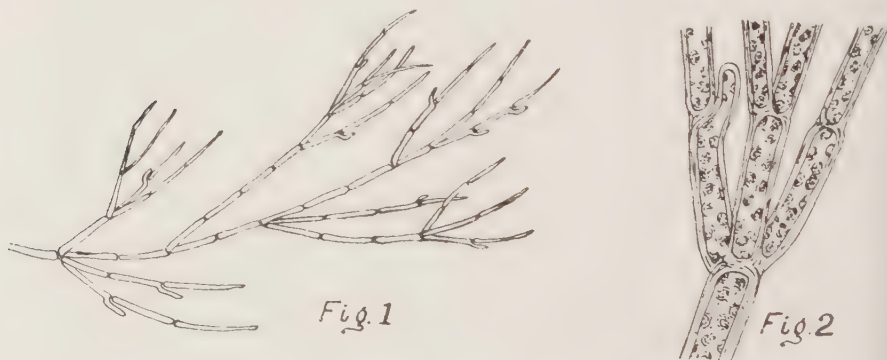


FIG. 1. (LEFT) *Cladophora Kuetzingianum*. TIP OF PLANT MULTIPLIED BY 5.

FIG. 2. DETAIL OF BRANCHING. MULTIPLIED BY 125.

It appears then that inoculation must have occurred in the natural part of the stream at about 104 Watchogue Road but the foothold offered by the concrete bed lower down afforded the best attachment, and the narrowed flow gave the best water conditions for growth.

The subsequent history is about as follows: Maximum growth reached about June 17, 1950. In late June some shortage of water led to thinning out. Rains of July 11, 12 tore away most of the extended growth; on July 15 pieces up to $1\frac{1}{2}$ inch long were all that could be collected. By July 29 new growths reached two inches long.

On August 1st and 2nd rains again reduced plants to almost nothing but by August 15th some patches were again green. On August 19th and 20th 3.94 inches of rain fell, the brook overflowed and completely denuded the bottom except for some blackish rhizoidal patches.

In September some growth was noted but early October rains cleared the final green for the year. Some black marks on the cement indicate the possibility of new growth next year.

In view of the rapid loss of stations for algae on Staten Island due to drainage of pools and brooks, this resurgence of a plant requiring somewhat special conditions for its existence will be watched with interest.

*Marine Algae of the New Jersey Coast and adjacent waters of Staten Island. Isaac C. Martindale, *Memoirs of the Torrey Botanical Club*, Vol. 1, No. 2, Aug. 24th, 1889.

Annual Spring Exhibition

GERALD BERNSTEIN

The Seventeenth Annual Spring Exhibition by Staten Island artists had its opening on Sunday, April 1, and was viewed with great interest by a large crowd. Eighty-seven paintings were shown—the work of fifty-nine artists. Although the exhibition was predominantly of oil paintings, other media were represented: lithography, pastel and pencil drawings, water color, casein and gouache paintings.

The standard of work was high, as usual, and a number of new exhibitors showed their work. The exhibition remained on view through the month of April. The following is a list of the artists and their work in the exhibition:

Summer in the Country	Mary L. Bannon
Winter in the Country	Mary L. Bannon
The Farm	Thomas A. Bannon
Mrs. Perry Alexander	Albert Barbelle
Mountain Road	Albert Barbelle
Little Stream—Clove Park	Henrietta Beaumont
Flower Study	Henrietta Beaumont
Street Scene, La Bouille, Normandy	Ely M. Behar
Professor Herbert Holton, (Loaned by City College of N. Y.)	Ely M. Behar
Elizabeth	Gerald Bernstein
After the Holocaust: Rebirth	Gerald Bernstein
Torso	Donald A. Browne
Still Life	Donald A. Browne
Springtime in the Desert	Joseph F. Burlando
Here and There	F. A. Busing
Just Peace and Quiet	F. A. Busing
Mrs. Agnes Bateman	Alice Canady
Martha	Alice Canady
Old Sailor's Dream	Lawrence Cianchetta
The Bather	Armen Darson
Charles Albin Bundsen, M.D.	Ida Dudley Dale
Caldera Place, R. M.	Ida Dudley Dale
House by the Mill Pond	Ethel Easley
The Duck House	Ethel Easley
Hensonville	Elsa F. Ericson
Conch and Candlestick	Elsa F. Ericson
Communipaw Engine Terminal	Christian E. Everson
Royal Blue—Westbound	Christian E. Everson
City Park	Eleanor Fichtmueller
Symphony in Blue Rose	Sarah R. Friedel
Landscape	Lucille B. Friedland
Summer Kitchen	Helen Friedman
Kathryn	Helen Friedman
Tibetan Art Garden	Lola Landry Gerow
Cape Horner	Lillian W. Gilfillan
Norwegian Fjord	Lillian W. Gilfillan

Ward Hill	Hans Glinicke
Study	Hans Glinicke
Fruit Motif	Patricia Greene
Flower Study	Patricia Greene
A Rose	Marion Hepner
Portrait of My Wife	Robert A. Hitch
Oriental Charm	Robert A. Hitch
Still Life	Jean Leason Hitch
Tysen Lane Hillside	Mary T. Howe
Aunt Jen's—Colesville	Edith Jacoby
Path to Shrine—Mount Loretto	Edith Jacoby
Todt Hill View	William L. Johnston
Barrat's Cove	Stanley Jorgensen
Trees—Snug Harbor	Stanley Jorgensen
David Bridgman at 13	Valeria Korniloff
Still Life	Helen Kosanke
Flower Study	Marjorie Kuhfahl
Still Life	Isabel Leason
Spring Flowers	Isabel Leason
Mrs. Carmichael	Percy Leason
At Poundridge	Percy Leason
Still Life	Edward L. Love
March Sunshine	Eleanor Marshall
Winter Afternoon in Stapleton	Alice Craig Martin
Mexican Patio	Alice Craig Martin
Block Island	Alfred McNamara
Recollections	Bruce Moore
Lobsterman Painting his Buoys	Bruce Moore
Eventide	Agnes Morgan
Canal Scene—Freeport, L. I.	Agnes Morgan
Tug Procession	John A. Noble, A.N.A. (Elect)
Pamela Ann Waite	Elizabeth F. Nugent
Deidre O'Connor	Elizabeth F. Nugent
Dockside	Joseph Nugent
Figurine	Margaret K. Rue
Spring Bouquet	Margaret K. Rue
Rip Van Winkle Bridge	Edythe W. Scott
Connecticut Barn	Violet Siemerling
Victorian Piece	Isabel Grinnell Simons
Venus de Milo	Elizabeth L. Sherman
Refreshments	Elizabeth L. Sherman
Portrait of Dad	Seymour Sherman
Wedgewood and Roses	Seymour Sherman
Portrait of a Young Girl	Setta Solakian
Dogwood	Ester Dahl Tellefsen
Judith	Mary C. Triano
Primitive Man	Mary C. Triano
Fisheries Bayou	Helen Bogart Vail
Mountain Road	Hattie S. Waldo
For Members Only	Emma L. R. White

The Executive Committee of the Section of Art served as a jury of selection for this show.

Occurrence of Hop Hornbeam on Staten Island

LEE A. ELLISON

Among the less conspicuous and less abundant forest trees of the Northeast and of the Atlantic Coastal Plain we may list the Hop Hornbeam, *Ostrya virginiana*. It never attains the height of its relatives the birches, nor the size of its forest companions the elms, maples and beeches. We find it preferring the shade of other trees, seldom attaining a height of over twenty-five feet and a diameter of less than two feet. Its occurrence is always in the form of scattered specimens, nowhere forming a dense or pure stand of the tree. While resembling the birches in its early spring catkins, and both the birches and its close relative the blue beech or American hornbeam in its leaves, the tree has three distinctive field marks: its thin bark is shredded, longitudinally striated and often showing a slight spiral tendency; its fruit is a cluster of flattened pale yellow bags compacted in the form of a brewer's hop; its wood is very hard and cross-grained.

Occurrence of the hop hornbeam on Staten Island was not noted until November 1896, when it was reported by Mr. Walter C. Kerr growing on the Corson farm at New Springville. No more comments appear in our records until 1907, when it was reported that "only a few trees remain." The late William T. Davis reported more completely on its occurrence in 1930 when he found it occurring as scattered specimens in the locality of its first discovery—along Corson's Brook which is now at the south of Willowbrook State School, and also in "East Watchogue swamp" at the corner of South and Merrell Avenues.

Nine years later the writer found three specimens, two twin tress and a single, near New Springville Brook at the rear of 1050 Rockland Avenue, now known as "Sheriff's Posse Arena." Since then three other specimens have been found in this vicinity, in the woods between Rockland Avenue and Klondike Avenue. The writer also knew of one specimen on the border of a small swamp in the woodlands now occupied by the Willowbrook State School, and in 1948 found one large specimen of hop hornbeam growing on the bank of Corson's Brook not far from the site of finding the first specimen.

Two of the trees thus far found are of fair size, over a foot in diameter and in apparently healthy condition. They bear a profusion of "hops" each fall; in form they are short of trunk, with wide-spreading branches to form a round head. The smaller trees, particularly the "twins," do not appear to be in as healthy a condition: this may be due to the original injury that caused two trunks to develop from the original seedling. This injury was probably a brush fire.

On Staten Island the tree seeks rather wet ground and shows a preference for banks of little intermittent brooks. The seven specimens thus far discovered probably do not comprise all the trees of this species here, and it should be looked for in brookside localities along Corson's Brook which is at the south of Willowbrook Park, also in the entire tract of woods lying between Rockland Avenue and Forest Hill Road and Richmond Hill Road. A search through the Merrell Avenue swamp failed to discover any trees of this species, though additional search should be made here and in the woods lying between Merrell Avenue and Lambert's Lane.

Death or destruction of these specimens will probably mean the extinction of this tree on Staten Island, for we have no reason to believe that seedlings are becoming established in the vicinity of the fruiting trees.

Naturalists Study the Island

During the spring and summer of 1948, under the leadership of Mr. I. C. G. Cooper, a coordinated study was made of the flora of "Buck's Hollow" and adjacent areas in the eastern or undeveloped portion of Latourette Park. Participating in this study were several members of the Museum's Natural History Section who specialize in various fields of nature study. A report of the findings of this group was published in the *Proceedings* for April 1949.

This coming spring and summer it is planned to make a similar study of the areas (1) lying between Arthur Kill Road and Richmond Creek, and (2) on either side of Huguenot Avenue near its junction with Arthur Kill Road. In the former area are four, possibly five, clay-pit ponds of varying sizes. Landfill operations are extending close to two of these ponds; for this reason it has been considered advisable to promote study of the flora and fauna not only of the woods and brushlands and marshlands, but of shore and aquatic life of these ponds. In the second area not much study of plant life has been made in recent years. Mineralogical studies of parts of this area have been made by Mr. John Behm and it is hoped that, in connection with study of flora and fauna, more work on the clay and sand deposits along the brook may be made this summer.

Some Aspects of Reality

PERCY A. LEASON

On January 14th and succeeding Sundays three lectures on painting were given at the Museum. The purpose was to demonstrate that the art is in a serious state of decay under the influence of what is called "modernism," and to review the chief factors which are essential in rational and vital painting. The general title of the lectures was *Some Aspects of Reality*.

Important concepts were advanced for discussion. The two which formed the principal theme of the lectures were the following:

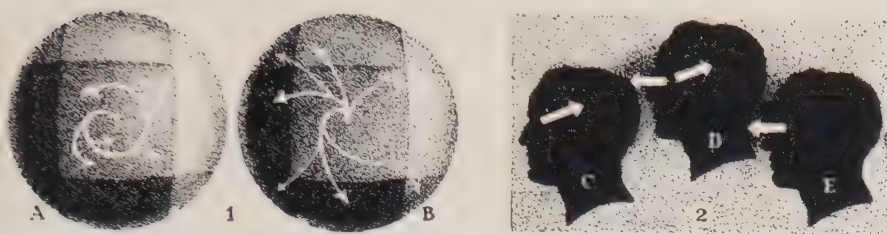
1. Reality has many aspects with definite boundaries separating the various aspects. Some of these are symbolized in Fig. 1. The author does not pretend to be a philosopher and name these various aspects; but one may be taken to represent the physical aspect, another the visual and so on. For the purpose of the discussion, we shall say that the central, nearly-square area represents the visual aspect of reality.

The exploration of this aspect is reserved for the painter, since he has the only means to explore it adequately; the only known way to analyze any given visual image and discover the relation of its component parts—its shapes, tone and colors—is to take canvas and pigments and dissect the image.

This exploratory function of painting was recognized in producing the finest examples such as those of Velasquez, Rembrandt, Constable, Manet and a few others. The painter made no attempt to go outside his field (Fig. 1, A). He left the exploration of other aspects of reality to other specialists.

When the painter attempts to go outside his field and combine in his picture truths found in other aspects of reality with those found in his own (Fig. 1, B), compromise and confusion become inevitable; the various conflicting truths cancel out each other. In the first lecture it was demonstrated that the painter cannot concern himself with such things as anatomical or psychological truths and express these without sacrificing visual truths. The work of Audubon for example, demonstrates the inflexibility of the law involved here; he gives us neither pure ornithology nor the actual visual appearance of birds.

2. Painting may be divided into three main classes: Fig. 2(C). When the artist turns his mental focus inwards and uses material— invariably vague and inadequate material—derived from past experience; (D) When the artist alternately turns his mental focus inwards and outwards and brings together in his picture the material that he finds in both ways; (E) When the artist keeps his mental focus fixed on the visual aspect of reality and brings into his picture only what he perceives during the particular experience.



FIGS. 1 AND 2.

True primitive art and most of what is called "modernism" belong to the first class (C). The great rank and file of pictures belong to the second class (D). Only the most advanced painting such as that of Velasquez, Rembrandt and others, in their maturity, come into the third class (E).

This last is called the highest class because the truth content in painting reaches its highest point and because painting now becomes a true universal language since it coincides with visual experience common to all peoples.

In the second and third lectures the history of painting was briefly reviewed and these two concepts were advanced as the obvious explanation of rises and declines. As painting rose or declined at any time it followed the same broad pattern: it commenced with the practice symbolized as 2 C, rose as it gradually turned to the practice of 2 D, and moved on to 2 E; it declined as it returned to the practice of 2 C. Only on rare occasions did it rise to the convictions and practice symbolized in 1 A and 2 E. Two such notable times were the middle of the seventeenth century, at the peak of the European Renaissance, and again during the nineteenth century up to the coming of the "moderns."

The tendencies which brought about the present decline developed out of the "impressionist" Monet's attempts to vitalize painting by wandering out of the visual field and into physics (1, B)—his use of spottiness in various tints to make a gray. He failed to realize that while the physicist's aspect of reality reveals that gray is produced by a mixture of colored light waves, this fact is not revealed in the field of common eyesight; when our eyes give us a flat gray it is nothing more complicated than a quality which can be

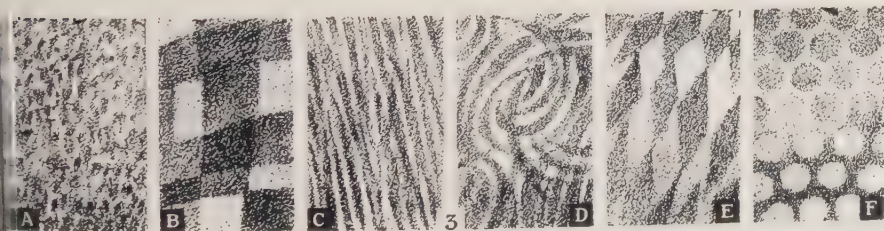


FIG. 3.

reproduced in painting by a mixture of black and white modified by various tints.

Monet's good but misguided intentions merely created a new confusion, and many painters were soon wandering into it talking science and carrying text books on the physics of light and color. Cezanne, also one of the "Impressionists", talked vaguely of his "little sensation" and developed strange, pseudo-scientific notions that led him into distortions which eventually became great virtues in art.

This preoccupation with color—the desire to give it everywhere—brought about a restriction of tonal range. Darks were lifted up from black so that they could be given in arbitrary blues or purples etc. Lights were kept down from pure white so that they could be pinkish or yellowish etc. This meant the sacrifice of the dramatic quality commonly seen in the visual aspect of reality. With the new, restricted range painting became somewhat pale, sickly and pretty. In exhibitions everywhere it lost its robust character, and in due course the time was ripe for some movement to bring back a shock. Towards the end of the nineteenth century this shock came in a particularly violent and irrational way.

To certain adventurous young men the spottiness of pretty tints had brought a great excitement into the galleries, and with a natural urge to make a place in the world they seized their opportunity. The vari-colored spots of Monet and his friends (figure 3,A) were enlarged and turned into streaks, squares, lozenges, dots etc. (B,C,D,E,F). The juggling with color and with Cezanne's notions and distortions led to all sorts of conflicting schools in which the intention of Monet was forgotten. As for the visual aspect of reality, this was dismissed by shallow argument as something to be left to the camera. "Advanced" schools arose to drag art further back to primitivism (2,C) by a direct study of primitive art.

The point has been reached when it must be extremely difficult for any "modern" painter to say which particular aspect of reality he is exploring—if indeed he is exploring any.

The February Group Show

ALFRED MCNAMARA

An exhibit of paintings by four Staten Island artists was opened to the public in the Museum Gallery on February 4, and closed February 28, 1951. The artists represented in the exhibit were Cecil Bell, Stanley Jorgenson, Alfred McNamara and Warren Robinson.

The following is written not as a critique of the work shown, but in answer to a question which has been asked of the Museum: Why have these four artists been invited to exhibit in a group show? They form the nucleus of the group of so-called "modern" painters who are members of the Art Section of the Museum. I would prefer to use the word "creative" in lieu of the word "modern" which is a meaningless generalization. We are all contemporary painters whether painting in the naturalistic, realistic or abstract schools or in any of the many "isms."

The February show brought together artists who paint as individuals. They do not follow any particular school of painting but with the study and understanding of the many schools of art have tried to use their knowledge to formulate a creative approach to painting. It is only when artists have this drive for experimenting and creating that art will continue to flourish. Because of this the Museum showed these works and gave Staten Islanders the opportunity to see and judge for themselves the merits of the paintings. Only when a number of works of an artist can be seen in a group is it possible to fairly judge whether his aims have been realized and the value of his achievement.

Probably the clearest division in the field of painting is between the naturalistic and the creative artist. The former paints selectively what he sees, but the creative artist, while he often paints realistically, produces a picture the composition of which is the result of his feeling for or reaction to the subject matter which he chooses.

The Modern Movement which began in Paris around the middle of the Nineteenth Century was not an innovation in the art world but only a revival of creative art which had flourished during various periods in the history of art. Many of the experimental schools of painting which began at this time traveled down blind alleys and died there, but the new life that energized art at that time lifted it out of its complacency and continues in our time to keep it strong and alive. Complacency and lack of imagination in art is death and it is a responsibility of an interested public to demand that the works of artists be made available to them without censorship.

Everyone who has an interest in art has personal preferences and it is to be hoped that it will always be the wish of the Museum to present in its gallery representations of as many schools of painting as possible so that those who come here can see and judge for themselves.

The Census Looks at Staten Island

Part III

ROSWELL S. COLES

This final section of an analysis of problems confronting Staten Island will deal with the contributions which institutions such as our Institute of Arts and Sciences can and should make toward the enrichment of community life. The first two parts discussed briefly certain emerging community needs in planning and programming for growth, for internal change, for special groups and for various age levels. Trends were noted which give rise to the need for increased programs of health, education, recreation and welfare. These programs are going to cost time and money and our choice is not so much to "spend or not to spend" as some would lead us to believe, but rather to determine how wisely our time and money will be spent.

This section deals with institutional responsibility in the community. Abbott P. Herman in his provocative book, *An Approach to Social Problems*, points out the major causes of social change and dwells at some length on the failure of local institutions to perform their true functions in just the sort of society we now find emerging on Staten Island. If his thesis is true, and our contemporary history seems to bear it out, the proper functioning of local institutions is a prime requisite of a good community. How can institutions function more usefully on Staten Island?

In the first place we need to reorient our thinking about fundamental purposes. If we see the word "museum" our first image is almost certain to be a building, an exterior or some interior scene or exhibit. If we think of "Staten Island" we think of land and buildings. "Home" is likely to call up the image of our residence. These physical images seem to be inherent in our culture.

In our preoccupation with material things we forget that the prime components are not land, bricks and machines, but people. For the image of a museum building we must substitute one of people, people enjoying themselves, looking at interesting exhibits, learning something, acquiring certain useful skills.

Institutions, like individuals, frequently are guilty of the same misdirected thinking. We get to worshipping a building, or a body of knowledge such as "science" or "art"; we take pride in administrative procedure for its own sake, forgetting that our service to people is the great purpose for which all institutions exist.

Unless we clearly recognize our fundamental duty, Herman's analysis of institutional failures will continue to be all too true.

Secondly, it is axiomatic that in a city the size of New York no one institution, department or agency can, by itself, provide all

necessary facilities for carrying out successfully even one minor aspect of a program for people.

For example, would a separate Department of Recreation of the City of New York solve our recreational needs? Probably not. What is more needed is a voluntary coordination of all groups dealing with this important community need.

Professional guidance in the process of coordination is certainly needed. Funds for this necessary purpose might be raised by private subscription but in a city like New York they probably can only be derived from taxes.

The question of taxes raises another point. Because of our preoccupation with our own affairs Americans are prone to think of government as a sort of necessary evil to be borne grudgingly and fought at every turn. Would it not be more fruitful if we thought of government as a set of tools with which we can do useful community work? Certainly we have been using antiquated tools, and we have often allowed them to become dull and rusty; but the need for tools increases with the complexity of the job at hand.

On Staten Island there are three agencies primarily concerned with coordination—the Chamber of Commerce, the Community Welfare Council and the Community Chest. It would seem a paramount duty of local institutions to be concerned with these groups and to support them. We know, of course, that there are fundamental problems to be solved in the philosophy and practice of coordinating our activities, but in the long run the achievement of cooperative planning and action is more important than keeping our noses to our own grindstones.

It is quite evident that we shall make little progress unless we exhibit a good deal of local initiative. "George" has never been of much help to us on Staten Island and it now appears more unlikely than ever that "Harry" will do much better. In stimulating this initiative our local institutions can provide the best available resource of trained leadership, of active members, of a knowledge of basic needs and a good deal of useful material.

There are three major factors in any community program, fact finding, planning and programming or action. These can never be neatly worked on in chronological sequence at any community or individual level. Life has to go on while we deal with each, but progress can be made.

Professional leaders know well that we lack a good deal of specific knowledge about Staten Island. Events which we read about or experience may or may not be typical. Traditional attitudes towards problems and solutions may not fit today's situation. Sometimes vital information is difficult to obtain because of political or other considerations. Further, a lack of complete knowledge is often used as an excuse to do nothing. Yet a consideration of the first two parts of this paper shows that problems of delinquency are acute in certain sections, that we are developing problems relating to an aging population, that we have a large non-integrated foreign-born

population, and other community difficulties. It is not necessary to have murders committed nor hospitals overcrowded before action is taken.

Community organizations are useful in fact finding. In one sense the process is at best a nuisance, blanks to fill in (which usually don't quite apply to us) meetings and more meetings, spadework nobody wants to do. In any new project there must be a certain amount of experimentation, with blind alleys, unsuccessful trials and some downright failures which seem like a great waste of time and money. Any chronic faultfinder will have plenty to complain about in the process.

The Staten Island Institute of Arts and Sciences has certain areas in which it may well assume leadership in our community. Several generations have accumulated a great deal of information about our Island and it is doubtful that in any one place can so much be learned about it as in our own library. Further, the human values realized in the study of ecology, the interrelationship of all branches of natural history, will make better living for all of us. In the past we have been concerned with conservation, but all too frequently only after some beautiful section had already been re-mapped in man's image and the contracts let for a total "face lifting." At present we are studying two areas which ultimately should be preserved, perhaps as a part of our park system. This study and planning should result in constructive action.

In the arts, too, there is much to contribute beside picture painting. Museums have tended to worship at the shrine of beauty for its own sake. But here, again, the human element enters and our chief function is to transmit the joys of the beautiful to our fellow men. Hanging pictures or displaying objects of art is not enough, they must be made meaningful to some degree to every museum visitor. Beauty is not incompatible with utility—women know that instinctively even if we men have yet to learn it. City planning, architecture, both domestic and public, treatment of parkways and waterways should receive our attention.

We must recognize that the Institute and the community really are different from what they were in days gone by. In the beginning our organization consisted of fourteen men who joined together to promote an interest in natural history. While the group welcomed anyone with similar interests it was essentially private in character. Today considerable financial support comes from the City of New York and we must think of ourselves as a public institution, concerned not so much with our individual desires as with the public welfare. A growing staff both paid and volunteer brings professional knowledge and skill to the filling of institutional obligations. Endowments both direct and restrict the direction of our activities. And as we grow older, the institution, like any of us, tends to look backward, to reminisce about the good old days, and to forget that a corporation, as well as an individual, may have eternal life only if it is worthy of it.

In the field of human relations a great deal of emphasis has been placed on the value of group activities. We are beginning to understand that people are what they are because of their social relationships. We are finding that opportunities for social adjustment, for pleasant group relationships are more fundamental and more important to people than the specific subject matter of any particular institution or program.

We may point with some pride to the fact that our Institute recognized a need for group activities nearly fifty years ago when it provided sections and affiliated societies as functional parts of our organization. The institute is now composed of fifteen such groups with perhaps fifty minor subdivisions and one of our chief concerns is in ministering to the needs of these groups. But many more groups could make use of our facilities. The encouragement of various national groups with divergent, colorful backgrounds would be a useful community service.

We should also be aware of the basic importance of recreation, the re-creation or regeneration of the human body and spirit. Recreation is a fundamental need and on the adult level may well be more important than learning as we usually conceive it. Of the three types of recreation, competitive, productive and passive, the Institute can and does make a decided contribution, although competition is by no means a universal component. There is no need here to review the Institute's program—we try to advertise it as widely as possible; what we must do is to make the most of its re-creative potentialities.

Finally, to young people our institution ought to have a special significance. Those who have learned to love the outdoors and to respect the wonders of nature tend to make good citizens. Not only through our own programs but also through help to youth organizations not excluding the public schools we can make a genuine contribution to the welfare of youth and to the future of our community.

Color Photography

BILL HUNN

With Spring and Summer coming on, every year more people turn to color in their photography, and a new army of beginners tackles the job of getting acquainted with its color cameras and getting the best results from them. As Director of the Metropolitan Camera Club Council's Slide and Club-of-the-Month Competition, where more than one hundred clubs submitted their best color slides, I have had an especial opportunity to observe some of the difficulties which all of us face from time to time. Even in that stiff contest by experienced color photographers, we found some basic faults; and the average beginner is sure to run into a great many more.

Given a beautiful day and average subjects, if you take your pictures in the middle of the day with front lighting, following the manufacturers' directions exactly, you will get fair rendition of color. But too few people will bother to read or evaluate the instructions that the maker has spent thousands of dollars to test and write out. Therefore we find a tremendous waste of film either so overexposed that practically all color is washed out, or so dark from underexposure that we cannot tell what the subject is. For real color photography, it will pay the photographer in the long run to purchase a good photo-electric exposure meter. It will pay for itself many times in the better results and the resultant savings in wasted film.

Now, when we have our exposure fairly in hand, we're all set to take some color shots. The beginner generally falls into two traps; he tries to take too much, and he tries to take too great a variety of colors. By keeping our shots simple, with a single center of interest, we strengthen them much more than if we tried to include too much subject-matter. Also, three or four colors will bring out color to much better advantage than if we ran the whole gamut of the spectrum. Look your shots over carefully and see if a lot of them couldn't be made better.

When shooting color with the express purpose of having prints made, it is imperative that you have flat (front) lighting, because a print will not give full rendition of the color transparency, and anything even slightly shadowed will print black, with entire loss of detail. But if you are shooting interesting subjects that will only be projected, the shadows will generally take an ordinary shot and make a beautiful one of it. So decide what you intend to do with it before you shoot.

Institute.) Dr. French's article therefore is of local interest here, where Dr. Britton was born and where he lived for many years. (Elsewhere in this number of the *Proceedings* we note the passing of another member of that old Island family, Dr. Britton's sister, Miss Harriet.) He became a founder of the New York Botanical Garden and its first Director, and he and his wife presented to this Institute the old Britton Cottage at the foot of New Dorp Lane. For twenty years Dr. and Mrs. Britton journeyed into every corner of Puerto Rico. A high, double-pointed peak there is named Mount Britton in his honor, and Dr. French found persons who remember him well.

M. A.

Institute Notes

The Director Resigns.

At a meeting of the Board of Trustees on January 15, Mr. Roswell S. Coles tendered his resignation as Director of the Staten Island Institute of Arts and Sciences, having accepted a position at Wagner College as Professor of Sociology. The resignation was accepted with regret.

Dinner to Honor Director.

In honor of our retiring Director, Mr. Roswell S. Coles, a dinner will be held at the Meurot Club at 6 P.M. Thursday, May 24. Invitations to members and their guests will be mailed in advance of the date. Reservations for the dinner will be taken at the Museum Office up to May 19.

Annual Meeting and 70th Anniversary.

The Annual Meeting of the Institute will be held following the dinner, providing an opportunity to transact business, such as election of trustees and brief annual reports, which have become too cumbersome to handle before a Davis lecture. At this time we will also commemorate the 70th Anniversary of the Institute.

Science Exhibition.

The 21st Annual Science Exhibition will be held in the S. I. Day School on Saturday, April 21, 1951, at 8:15 P.M. Interested individuals as well as groups representing schools and other institutions have been invited to exhibit their work demonstrating some particular experiments, research or study in any field of science—biology, chemistry, physics, astronomy, natural history, etc. The Committee in charge consists of Joseph F. Burke, Hans Behm, Roswell S. Coles, Dr. Ralph Deal, Rev. J. Bernard Hubbert, O.S.A., Robert Mathewson and Miss Mathilde Weingartner.

The Philatelic Society.

The Philatelic Society will hold its annual dinner April 23, at the Riviera Chateau, Oakwood Heights. Elliott Burgher is head of the arrangements committee. A gold medal will be presented to the over-all winner at the recent Stamp Show held in the Museum.

Davis Memorial Lecture.

Dr. Ruoy Sibley, Scientist, Author and Lecturer, will present the final Davis Lecture of the season when he tells of "The Universe of Palomar" at Curtis High School on Saturday, May 19 at 8:15 P.M. Through his motion pictures Dr. Sibley will show the thrills of outer space as seen through the world's largest telescope. The 200 inch telescope is shown from the casting of the great glass disk to its final installation as the "Big Eye" of Mount Palomar.

Oratorio Society.

The Staten Island Oratorio Society will present its Spring Concert late in May or early in June when "The Crusaders" by Niels W. Gade will be sung under the direction of Harry Russell. This oratorio is a musical setting of one of the early Crusades when a band of Crusaders, under the leadership of Peter The Hermit, marched to recapture the Holy City of Jerusalem from the Saracens.

The Woman's Auxiliary.

The Woman's Auxiliary of the Staten Island Museum will sponsor its Annual Dessert Bridge to be held on May 10 at 1:30 P.M. at the Boulevard Hotel, Grant City, under the co-chairmanship of Mrs. Thomas Bothwell and Mrs. Edward Bungay. For serious players a Duplicate Bridge will be held in the Museum on Friday, April 20 at 7:30 P.M. with Mrs. Fritz Sampson in charge. Mrs. Frederick F. Richardson, president of the Auxiliary, urges everyone to support these events as it is through them that the Auxiliary is enabled to make its annual donation to the Museum.

Institute Courses.

Ten courses for adults and two for children are being given this spring, as follows:

Mondays	Sculpture, Arthur Lorenzani
Tuesdays	Basic Principles of Jewelry Making, Miss Gladys Renfield Painting, Drawing and Composition, Warren F. Robinson Oil Painting, at 191 St. Marks Place, Percy Leason Public Speaking, Prof. Volney Hampton Opera Lecture Recitals, Miss Marcella Geon
Wednesdays	Music Appreciation, Miss Margaret Graves Ceramics and China Painting, Mrs. Irma Csak Elements of Music for Children, Miss Margaret Graves

Thursdays	Conversational French, Dr. Gaspard Pinette Local History, Charles C. Stoddard
Saturdays	Drawing and Water Color Painting for Children, Mrs. Lola Gerow

Spring Bird Walks.

The Section of Natural History will hold its Spring Bird Walks as follows:

- May 6. Wolfe's Pond. Meet 8 a.m. at entrance on Hylan Boulevard.
- May 13. Barrett Park. Meet 8 a.m. at entrance of Zoo.
- May 20. Moravian Cemetery. Meet 8 a.m., Todt Hill Road gate.

Civil Defense.

A Radiological Detection Unit has been established at the Museum. Courses will be provided on effects of radiation, contamination from radio-active material, etc. Dates of registration and sessions will be announced in the newspapers. Information can be obtained at the Museum. Robert Mathewson, Curator, is in charge.

Poster Exhibit.

Posters from the elementary and high school contest under the sponsorship of the Staten Island United Nations Committee were on exhibition during March. About 150 entries were hung.

Stamp Show.

The Staten Island Philatelic Society's exhibit of stamps attracted many visitors to our second floor throughout the month of February. Henry Kraemer was adjudged the over-all winner, the other winners being Miss Marian Pratt, Elliott R. Burgher and Walter Kuhn.

Craft Show.

The Handcraft Section of the Museum held its annual Craft Show in March, with a large attendance. The quality of the work was mature, and the demonstrations of the various crafts drew much attention.

Additional Groups.

Since the date of our last *Proceedings*, the following organizations have affiliated with the Museum:

The Richmond Institute of Musical Art, 991 Woodrow Road. Board of Directors, Robert A. Gilbert, Chairman, Margaret

Graves, Mrs. Glenda Halloran, Mrs. Aaron Parish, Miss Mabel Abbott.

Staten Island Beekeepers' Association. Richard H. Schweizer, President; John E. Helfrich, Vice President; Mrs. George Maki, Secretary; Edwin Rundlett, Treasurer; E. Ferenczi, Librarian.

Accessions

Among interesting accessions received since those reported in these *Proceedings* for January, are an unusual number of paintings presented to the Museum's permanent collection. Several of these are outstanding in artistic or historic value.

First, perhaps, should be mentioned a painting by the Staten Island artist Jasper F. Cropsey, whose work became famous both in this country and Europe in the nineteenth century. This is given the Museum by Cropsey's nieces, Miss Bessie Cropsey Gillender, 36 West 36th Street, Bayonne, and Miss Mabel Moore, 47 Englewood Avenue, West Englewood, New Jersey. The painting, which was dark with age, has been cleaned, revealing the date, "1840," which proves it to be one of the artist's earliest works.

Also of much interest are two paintings received from Helen Crocheron Brown, 3 Emerson Drive. One is a picture of the farm of Andre Mille, great-great-grandfather of Mrs. Brown, painted about 1830 by Becker. The Mille farm lay between what is now Hylan Boulevard, and Prince's Bay. The other painting is not local in subject, but it was painted by Anne Seguire, of the old Staten Island Seguire family, later Mrs. Stephen Dover Crocheron, Mrs. Brown's mother.

A casein painting by Henry Gasser, N.A., "Lambertville Road," is another addition to the permanent collection. This is the gift of Percy A. Leason. Mr. Leason recently painted a portrait of Mr. Gasser on the latter's election as an Associate Member of the National Academy. The practice of the Academy is that a newly elected member presents a portrait of himself to the Academy, and when he requests another member to do the portrait, he rewards the portraitist with one of his own paintings. Following this tradition, Mr. Gasser gave this painting to Mr. Leason, who has now given it to the Museum.

From the Estate of Vena Tompkins Carroll, eleven paintings have been received by the Museum, as well as miscellaneous papers and books.

A vanished Island industry is recalled by several old books and papers presented by W. C. Reinhold. These include express receipts dated 1858, also numerous bills etc. relating to the L. Brandeis Company, manufacturers of colors for printing. These were found in an old warehouse on the Arthur Kill.

Donors

Mrs. Helen Crocheron Brown
Estate of Vena Tompkins Carroll
Lee A. Ellison
Miss Bessie Cropsey Gillender

Percy A. Leason
Miss Mabel Moore
Mrs. C. E. Pearson
W. C. Reinhold
Joseph Risband

New Members

We welcome the following new members who have joined the Institute since the date of our last *Proceedings*:

Philip Brown
Mrs. Elaine Burnell
Mrs. John Gonigal
Mrs. A. Lawrence Green
George Latanzio
Mrs. Charlotte LeCarreaux
L. Dyke Ling
Miss Marie Lubrano

Mrs. Anita Ostwald
Ernest Ostwald
Paul Maddaus
Henry G. Reilly
Mrs. Charles W. Smith
Miss Margaret Tompkins
William A. Van Frank
Mrs. Russell Wittpenn

Necrology

Robert C. Stanley, mining engineer, and leader in the international nickel industry, died February 12, at his home in Dongan Hills. Mr. Stanley was the recipient of many honors, both national and international, for distinguished achievements in engineering and industry. He had lived on Staten Island since about 1904, and was prominent in local charitable, civic and social groups. He contributed toward the purchase of a painting by Jasper F. Cropsey for the Museum's permanent collection. In April, 1946, he was elected a life member, and in 1947 was made a Fellow of the Institute, in recognition of his work in engineering and metallurgy.

Mrs. Dagmar Johnson, 155 Longview Road, Grymes Hill, a member of the Staten Island Institute of Arts and Sciences, died March 11 in a nursing home in Pinewald, New Jersey. Mrs. Johnson was for many years an active member of the Staten Island Bird and Nature Club. She was a teacher in Public School No. 40, New Brighton, and Public School No. 6, Rossville, retiring ten years ago.

John J. O'Rourke, former Park Commissioner on Staten Island from 1924 to 1933, and *ex-officio* member of the Museum's Board of Trustees during that time, died March 13, in the Marine Hospital. Mr. O'Rourke had lived on the Island almost all his life, was educated here, served in the Navy, and later in the Spanish-American War. He was a member of the Board of Aldermen for ten years, then assistant commissioner of borough works, and was named Park Commissioner by Borough President John A. Lynch.

William Ludlam DeBost, for years a resident of Staten Island, died January 18 at his home at 155 East 72nd Street, Manhattan. Mr. DeBost was born in Manhattan, and came to the Island when he was sixteen years old. For thirty years he was a member of the vestry of the Church of the Ascension. During World War I he was on the committee which selected the site for the Army hospital at Fox Hills. He was a former President of the Staten Island Hospital, and of Sailors' Snug Harbor. He moved back to Manhattan in 1924. From 1923 to 1929 he was a member of this Museum.

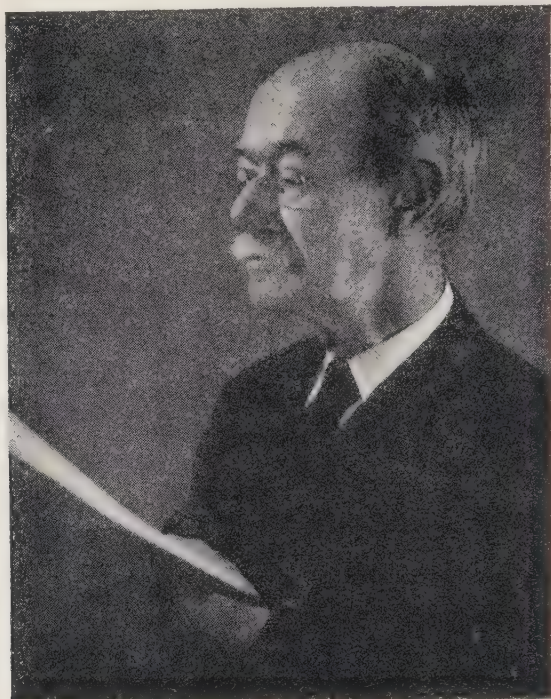
Miss Harriet Louise Britton, of 631 Great Kills Road, a member of this Institute since 1914, died February 24, at her home, after a long illness. She was ninety years old. Miss Britton was a descendant of one of the oldest families on the Island, and was a sister of the late Nathaniel L. Britton, who was one of the founders of the Natural Science Association of Staten Island, the original name of this Institute.

FORM OF BEQUEST

I hereby give, devise and bequeath to the Staten Island Institute of Arts and Sciences, Staten Island, New York, the sum of _____ to be used, (or the income from which to be used) for the work (or a specific purpose) of the Institute.

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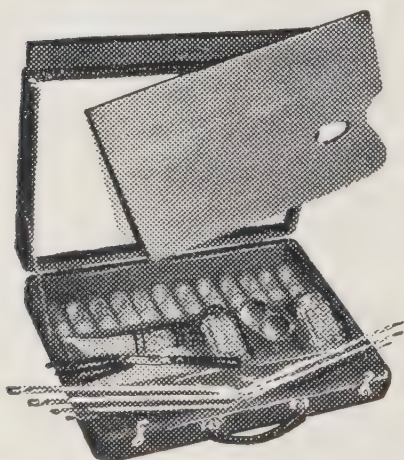
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ANNUAL
REPORTS

VOLUME XIII

NUMBER 4

July, 1951



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A STATEMENT OF POLICY

The new car market is tight. The used car market is mixed. No one can foretell whether or not the necessities of the future will dry up the flow of new cars and cause a drastic reduction in auto agency employees. The situation is fluid and can become critical in both new car purchases and in the servicing of existing models.

We hope these things do not happen but this we do know: no matter what the eventuality, Robbins Reef must continue to do its utmost to assure you efficient and dependable service from the fine Buick that you now own, and, when you need your new Buick, we must lend every effort to see that you get it.

If you are considering a new car will you help us to serve you by placing your order as soon as possible.

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PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES, Vol. 13, No. 4, July, 1951. Published Quarterly in October, January, April and July, by the Staten Island Institute of Arts and Sciences, 75 Stuyvesant Place, Staten Island, N. Y., and entered July 29th, 1918 as second class mail matter at Staten Island, N. Y., under the Act of August 24, 1912. Subscription price \$2.00 per year, included in annual membership fee of \$ 5.00. Mabel Abbott, Editor.



(photo by Russart)

ROSWELL S. COLES

Retiring Director of the Staten Island Institute
of Arts and Sciences, June 30, 1951

THE PRESIDENT'S MESSAGE

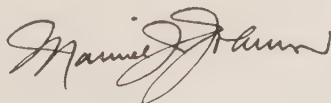
Our message this year must record a change which we face with mingled feelings. Roswell Strong Coles—"Roddy," as he is affectionately known to hundreds—has, after ten years of devoted service as Director of this Institute, "returned to college." That is, he is going to Wagner College as Professor and head of the Department of Sociology.

It is difficult to evaluate all that Roddy has accomplished. Sufficient to say that he has definitely and firmly established the many and varied new activities of the Institute in this community. His unbounded energy and enthusiasm and his whole-hearted interest in anything and everything pertaining to the Institute and its members have been a spark plug to all of us.

We rejoice that he has been elected a Trustee of the Institute and we hope and expect that we shall continue to benefit by his help and advice for many years to come. —Good luck, Roddy! May success continue to crown your achievements!

We have also to welcome most warmly Mr. Coles's successor as Director, Dr. James L. Whitehead, whose personality and background are a guarantee of his success in the task on which he is entering. Dr. Whitehead is taking up his work with enthusiasm and with a deep interest in the Institute and in Staten Island. We are fortunate in having him at the head of our growing organization.

It remains to express our gratitude to the many individuals and groups who have continued to support and help the Institute steadily and unselfishly; and particularly we thank our Mayor, Vincent R. Impellitteri; Commissioner of Parks Robert Moses, and Borough President Cornelius A. Hall for their co-operation and encouragement.

A handwritten signature in dark ink, appearing to read "Samuel J. Hall". The signature is fluid and cursive, with the first name "Samuel" being more legible than the last name "Hall".

STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES

July 1, 1951

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Joseph F. Burke	Joseph A. Palma
Roswell S. Coles	Alfred Shriver
Lee A. Ellison	Dr. Frank A. Strauss

Terms Expire 1953

Andrew M. Anderson	Hugh J. Jamieson
Edward G. Baker	Edward L. Love
Mildred S. Grimes	Harold A. Scheminger
Daniel L. Bridgman	

Terms Expire 1954

Dr. James P. Chapin	Robert M. Leng
Howard H. Cleaves	James J. Mallen
Manuel J. Johnson	Loring McMillen
Frederick H. Zurmuhlen, Jr.	

Ex-Officio Members

The Mayor of the City of New York

HON. VINCENT R. IMPELLITTERI

The Commissioner of Parks

HON. ROBERT MOSES

The President of the Borough of Richmond

HON. CORNELIUS A. HALL

*The Assistant Superintendent of Schools in the
Borough of Richmond*

MISS MARY M. BLAIR

Staff

Director.....	{ Roswell S. Coles (to June 30) James L. Whitehead (from July 1)
Administrative Assistant.....	Carla E. Nesslinger
Assistant.....	Dorothy McCracken
Switchboard Operator.....	{ Bessie W. Nellis (to May 31) Helen Muller (from June 1)

Curatorial Departments

Art.....	{ Jean Leason Hitch (to Aug. 31, 1950) Gerald Bernstein (from Sept. 1, 1950)
Handcrafts.....	Gladys Renfield
History and Literature.....	Mabel Abbott
Scientific Periodicals.....	Joseph F. Burke
Research Associate, Ethnology.....	Elliott R. Burgher
Research Associate, History.....	H. Cleaver Brown
Research Associate, Genealogy.....	Frank P. Bascom
Music.....	Harry Russell
Prints and Photographs.....	Daniel L. Bridgman
Science.....	Robert Mathewson
Davis Collections.....	Robert J. O'Connor
Research Associate, Algae.....	I. C. G. Cooper
Research Associate, Ecological Chemistry.....	Lee A. Ellison
Research Associate, Myxomycetes.....	Robert J. O'Connor
Research Associate, Microscopy.....	Joseph F. Burke

Education

Director.....	Pearl L. Coles
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Instructors

Astronomy.....	Charles Braun
Ceramics and China Painting.....	Mrs. Irma Case
Opera Lecture Recitals.....	Miss Marcella Geon
Water Color Painting.....	Mrs. Lola Landry Gerow
Music Appreciation.....	Miss Margaret Graves
Public Speaking.....	Prof. Volney Hampton
Sculpture.....	Arthur Lorenzani
Costume Jewelry Making.....	Mrs. Sylvia Pederson
Conversational French.....	Dr. Gaspard Pinette
Basic Principles of Jewelry Making.....	Miss Gladys Renfield
Painting, Drawing & Composition.....	Warren F. Robinson
Local History.....	Charles C. Stoddard

Maintenance

<i>Guard</i>	Andrew Schmitt
<i>Janitor</i>	Howard Coleman
<i>Watchman</i>	{ Harrison Johnson (to May 31) Conrad Schlenck (from July 1)
<i>Custodian, Britton Cottage</i>	Florence Mathewson
<i>Custodian, Davis House</i>	Mabel Abbott

The Woman's Auxiliary

<i>President</i>	Mrs. Thomas Bothwell
<i>First Vice-President</i>	Mrs. Edward Bungay
<i>Second Vice-President</i>	Mrs. John G. Anderson
<i>Third Vice-President</i>	Mrs. Samuel D. Stickle
<i>Recording Secretary</i>	Mrs. William Hammes
<i>Corresponding Secretary</i>	Mrs. Charles Berry
<i>Treasurer</i>	Mrs. John W. Stout

OUR SEVENTIETH ANNIVERSARY

To be exact, the Seventieth Birthday of the Staten Island Institute of Arts and Sciences will occur on November 12, but this seventieth anniversary year was celebrated May 24, with a dinner which was an historic event in more than one respect.

Our Director, Roswell S. Coles, was leaving us soon, and it was desired to show the Institute's appreciation of his services in some way in which his many friends could participate. Also, the seventieth milestone called for commemoration. Thus the occasion became almost automatically a joint one, with a double significance.

The scene was the Meurot Club, and staff and members of the Institute joined to make the setting brilliant. Mrs. Carla Nesslinger was in charge of arrangements. Flowers in abundance were supplied by Edwin Rundlett and were arranged by Mrs. Walter Westbrook and Mrs. Rutherford Van Vliet. The Trustees presented Mr. Coles with a beautiful watch, and the Institute staff gave him a sturdy brief case.

Addresses were made by President Manuel J. Johnson, Mr. Coles and Mrs. Fred. F. Richardson, and the Rev. Andrew C. Long pronounced the invocation.

Following the dinner, the annual business meeting was held, and the seven trustees whose terms expire in 1951, Dr. James P. Chapin, Borough Park Director James J. Mallen, Public Works Commissioner Frederick H. Zurmuhlen, Treasurer Robert M. Leng, Loring McMillen, Howard H. Cleaves and Manuel J. Johnson, were re-elected. Mr. Leng presented the Treasurer's report. It was voted unanimously to raise the membership dues to five dollars, in order to meet cost of services furnished to members.

Much of Mr. Coles's address is embodied in the Report of the Director, and the gist of the tributes to him and his work is expressed in the President's Message, both of which are printed elsewhere in these *Proceedings*.

The story of the Institute's first seventy years was told by Willard M. Grimes, a summary of whose remarks follows.

by WILLARD M. GRIMES

Three score years and ten in the life of an individual connotes the approach of the completion of his activities; but not so with the Staten Island Institute of Arts and Sciences. It is always young, always ready for new adventure in the two broad fields in which it has chosen to expand. And almost any worthwhile interest can be fitted in under either "Arts" or "Sciences."

The spontaneity of its organization and the sincerity of its members in their diversified groups probably account for the vigor displayed by the Institute on its 70th anniversary. One suspects, however, that the Nature Club or Bird Observers on their rural walks may have discovered the Fountain of Perpetual Youth. Mr. Davis once told me that he was looking forward to the next summer to see whether fresh-water jelly-fish would appear again in Brady's Pond. One does not ordinarily think of a museum as "looking forward", as its main concern seems to be with preserving the past, yet this spirit of "looking forward," which is the secret of Youth, has been evident in the Institute since its inception.

Before going too far afield, which is a fault with naturalists, let us glance back for a moment to that memorable evening in 1881, when a small group of earnest men of various ages, but mostly quite young, met in this immediate neighborhood to make it possible for us to hold this anniversary dinner tonight. It was pretty much of a "man's world" then, so there were no women in the group, as there undoubtedly would be today. But, in due time, women came to participate and to add their matchless ingredient. It was not until 1919, however, that the Woman's Auxiliary was organized with its definite responsibilities.

If we look in on this gathering of 14 or 15 organizers of the "Natural Science Association of Staten Island," as the first society was called, we will note several characteristics that have remained to this day. There was a diversity of interest, even in this small group. Sanderson Smith, who was chosen president and who is described in Mabel Abbott's "Life of William T. Davis" as "bearded and spectacled," was an authority on shells; another member was an authority on the nurture of grapes; and Mr. Davis, who had reached the mature age of 19, was becoming known as "Bugs" Davis.

But this diversity of interest found a common meeting ground in a love of nature and a conviction that Staten Island was worth studying. The fact that each was eager to work in his field and not just listen to what others had done or were doing made the organization dynamic from the start. Perhaps this is one reason why it has always appealed to people of all ages,—or maybe its members just remain children, viewing each new experience with fresh delight.

As was natural for a "Natural Science" group, the organization evolved from the simple structure to the more complex. For the first two years the small circle met informally, although by 1882 a collection of some 400 specimens had been assembled and a small museum was opened, with Mr. Davis as curator, in the New Brighton Village Hall. Staten Island was not to become a part of New York City for 16 years from this time. In 1883 the Association had 70 members, if not yet 70 years, and the first issue of the "Proceedings" was pub-

lished. These publications, covering much of the original work of the many distinguished members over the years, have been continued from this early number.

After a sojourn of 14 years at the New Brighton Village Hall, the museum sponsored by the Association moved back to St. George, and, in endeavoring to establish a closer contact with young people, was installed in 1906 in the newly completed building of the Staten Island Academy. In the meantime, it had evolved, through the scientific process of incorporation, into "The Natural Science Association of Staten Island." It was now a corporation and at least pledged to perpetuity. This period lasted down to 1905 and was marked by a pronounced stress on work in the natural sciences. During these years, many of the pioneers, such as Dr. Nathaniel L. Britton, Dr. Arthur Hollick, Charles W. Leng and William T. Davis, were becoming known beyond the confines of Staten Island.

The incorporation papers, dated January 19, 1885, define the objects of the Association as: (a) "to collect and preserve objects of natural science and antiquity, with special reference to local matters;" and (b) "to diffuse correct knowledge . . . by means of publications, meetings and public lectures." While the first object was later expanded to cover a much wider scope, the means of "diffusion" have remained about the same.

In 1898 Staten Island became a part of New York City but this historical event did not seem to affect the Natural Science Association, which continued its activities undisturbed. However, in 1905 the City of New York was authorized to "appropriate money for the care of collections" and this opened a new vista to the Association. "The Natural Science Association of Staten Island" went into its cocoon and out of it, through the metamorphosis of reincorporation, a form of legal reincarnation, came a beautiful butterfly, the "Staten Island Association of Arts and Sciences". Note well the addition of that little word "Arts." In 1907 a Public Museum was opened on the top floor of the new Borough Hall and the City of New York appropriated \$4,000 annually for its staff. Definite recognition of the value of the Museum to the public had arrived.

It is interesting to note the broader scope of the 1905 purposes, as set forth in the incorporation papers, as compared with those of 1885. They may be summarized as follows: (a) to encourage an interest in the *sciences* (not just natural science), arts and history (b) to collect and preserve objects of scientific and historic interest, especially such as relate to Staten Island (this will be recognized as one of the original "objects"); (c) to establish and maintain a public museum and reference library ("reference library" is a new and important addition); (d) to provide facilities for record-

ing and publishing scientific and historical information; (e) to preserve from needless destruction such plants and animals as are harmless; (f) to protect objects and places of natural beauty, and of scientific and historic interest.

After taking the City of New York into partnership and raising its sights far above all previous targets, the organization grew both in number of activities and in membership. The monthly Museum Bulletin was started in 1908. At about that time Dr. James P. Chapin, Alanson Skinner and Howard H. Cleaves began to be active in the Association. Dr. Chapin and Howard Cleaves are still active and have carried the fame of Staten Island to many distant places. Dr. Chapin is the oldest member on the roll today. In 1911 the City provided space for the museum in the Norvell House, which adjoined Mr. Davis' home. In 1918 the present museum building was occupied and in 1928 the second and third floors, including Mr. Davis' famous "Attic", was added. Having now outgrown our present shell, we are "looking forward" to larger quarters in the future.

Perhaps I should mention that the occupation of its own building in 1918, in the midst of World War I, was celebrated by another change in the incorporation, whereby the "Staten Island Association of Arts and Sciences" became the present "Staten Island *Institute* of Arts and Sciences." We are still plastic and flexible and when the new Museum is built, we are prepared to change the name again just to prove that we are progressive.

There have been only three Directors of the Institute in the past 38 years. Dr. Arthur Hollick, one of the Founders of the Natural Science Association, became Director in 1913. By that time annual exhibitions of paintings by local artists were being held and the Association was budding out into many different sections and branches. Charles W. Leng, also one of the Founders, became Director in 1919 and continued in office until his death in January 1941. During the past ten years our Director has been our own "Roddy" Coles who has brought to the Institute many new ideas as to the place to be filled by such an organization as ours in the changing and challenging times in which we find ourselves. His enthusiasm and energy have carried the educational and cultural work of the Institute to increasing numbers. We regret losing him as Director but are glad that he is advancing in the educational field in which he is so deeply interested and we shall retain him as a friend and Fellow-Bird-Walker.

Time does not permit to tell of the many channels through which the Institute now carries on its service to the public, both on Staten Island and beyond. The Reference Library, in charge of Mabel Abbott, is an amazing collection of material, relating principally to Staten Island. If you have never visited the Reference Library, you should do so soon. It is located in

the old Davis home on Stuyvesant Place. A glance at the Staten Island Museum Calendar for May, which announces this dinner, will give some idea of the numerous activities now grouped under "Arts" or "Sciences." In addition to the dinner, one notes the William T. Davis Memorial Lecture on "The Universe of Palomar," the High School Art Exhibition Life Sketching, the Exhibition of Handmade Dolls, meetings of the Belles Lettres Society and the Staten Island Poetry Society. In the music realm, are meetings of the Staten Island Oratorio Society, the Treble Choral Ensemble and the Richmond Institute of Musical Art. The membership today is about 900 as compared with the original 14.

I sometimes wonder just what the "Staten Island Institute of Arts and Sciences" really is. It is certainly a hybrid, like Mr. Davis' hybrid oaks, on which many branches bearing different fruits have been successfully grafted. Perhaps it might be defined as a cultural center without limits or boundaries. And because it has no boundaries there will always be new ideas and fresh explorations to keep it young. And we can look forward to the interesting changes of the future as you no doubt have looked forward to the conclusion of my talk.

REPORT OF THE PRESIDENT

MANUEL J. JOHNSON

(Read at the Annual Meeting of the Institute May 24, 1951)

Because of the unusual nature of our Seventieth Anniversary dinner it has become the pleasant duty of your President to report to you this evening on the work of the Institute during the past year. The management of your society has continued under the direction of the Board of Trustees, with your officers acting as the Executive Committee. Three committees of the Board of Trustees need special thanks for their very active year: the Legal Committee, Harold Scheminger, Chairman, Hon. Edward G. Baker and Hugh J. Jamieson; the Finance Committee, Robert M. Leng, Chairman, Edward L. Love and Alfred Shriver; the Publications Committee, on which the Board of Trustees has been represented by Lee A. Ellison and Roswell S. Coles. We are also grateful to Harold M. Dowell, C.P.A., for his work in auditing our accounts.

There has been one change in the composition of the Board of Trustees. On his resignation as Director, Roswell S. Coles was elected to serve the unexpired term of Mrs. Anton W. Hoffmeyer.

Our Woman's Auxiliary, under the capable Presidency of Mrs. Fred F. Richardson, has again been of inestimable service to us in promoting the work of our organization and we pay tribute, tonight, to Mrs. Richardson and the Auxiliary for their continued and generous support of the Institute.

During the past year the firm of Brown, Lawford and Forbes has been engaged to draw up plans and specifications for a new building to be erected in the lot on St. Mark's Place which is designated as the William T. Davis Park. We are indebted to Hon. Robert Moses, Commissioner of Parks, for his cooperation in progress toward a much needed new building.

Extensive repairs have been made to our present Museum building through funds provided by the City of New York, including roof, gutters, leaders, and plumbing. For this work and for annual expenses the City has contributed \$25,690, for this fiscal year. We thank Mayor Impellitteri and Borough President Hall for their continued support.

For their permission to occupy the Davis House which we use as offices and library, we again are grateful to the Staten Island Savings Bank. Theodore S. Faller, President. Not only is this old house of great use to us in our work, but we also certainly appreciate the opportunity to preserve for some time the home of our founder, William T. Davis.

The Britton Cottage has been closed for repairs during the past year.

Membership

Group membership continued with seven sections, but two new Affiliated Societies were added to our rolls during the year, the Staten Island Beekeepers' Association and the Richmond Institute of Musical Art. Individual membership at the conclusion of the year was: 890 Annual Members; 6 Patrons; 38 Life Members; 8 Fellows and 2 Honorary Members. Among the members whose passing we mourn must be particularly mentioned Mr. Robert C. Stanley, who was both a Life Member and a Fellow of the Institute.

Institute Council

Institute groups meet together in the Institute Council to plan joint activities and to discuss common problems. Two meetings were held this year and the Museum Open House is made possible by the cooperation of the Council. Officers for the year were: Walter Kuhn, President; Elliott Chapin, Vice President; Carla Nesslinger, Secretary.

Program

Eight hundred and fifty-eight different group meetings have been carried on during the year, 530 adult groups, 234 visiting classes and 94 Museum groups. Most popular have been the William T. Davis Lectures; we were gratified that the attendance for these lectures has necessitated moving the series to the larger auditorium of Curtis High School. Attendance for the year included 63,422 visitors to the museum, 1,330 to the Davis House and 5,190 at other functions.

Institute meetings were held as follows:

October,	1950	Museum Open House.
November,	1950	Davis Memorial Lecture, "Japan Journey," Karl Robinson, Speaker.
December,	1950	Christmas Concert, Music by Staten Island Oratorio Society; the Treble Choral En- semble; the Staten Island Chamber Music Society; Margaret Graves, violinist, accom- panied by Sylvia Small; and George Martin, piano.
January,	1951	Davis Memorial Lecture, "Safari in Africa," Murl Deusing, speaker.
February,	1951	Davis Memorial Lecture, "Algeria," Clifford J. Kamen, speaker.
March,	1951	Davis Memorial Lecture, "Valley in the Clouds" Nicol Smith, speaker.
April,	1951	21st Annual Science Exhibition, held in the Staten Island Academy.
May,	1951	Davis Memorial Lecture, "The Universe of Palomar," Dr. Ruroy Sibley, speaker.

Staff

During the year the Institute has functioned with a staff of 10 full time and 6 part time members as well as 14 instructors. To this number must be added a large number of volunteers, some of whom have provided nearly full time help; Daniel L. Bridgman, H. Cleaver Brown, Joseph F. Burke, Pearl L. Coles, Lee A. Ellison, Percy A. Leason, Casimir Redjives, Gladys Renfield, Edwin A. Rundlett, Ester Tellefsen, Thomas A. Watson and Mathilde Weingartner.

Gerald Bernstein was appointed Art Curator September 1, 1950, succeeding Jean Leason Hitch. Harrison Johnson, whose long and faithful service has endeared him to two generations of our members, was obliged by illness to give up the position of Night Watchman on May 31, 1951, and Conrad Schlenck was appointed July 1. Helen Muller was engaged as Switchboard Operator June 1, to succeed Bessie W. Nellis. James L. Whitehead was appointed Director as of July 1, succeeding Roswell S. Coles.

It is gratifying that after so many years (the present Museum was opened in 1918) Museum employees finally have been incorporated into the Social Security system and our own staff came under its benefits on January 1, 1951. Cost of living bonuses were also granted by the City during the year.

REPORT OF THE DIRECTOR

ROSWELL S. COLES

Much of the material usually included in the Director's report was presented by the President, Mr. Johnson, at our annual meeting and appears elsewhere in these *Proceedings*. This makes it possible for me, as retiring Director, to make my report a more personal message,—one of appreciation for your wonderful co-operation during the past ten years.

First of all I want to thank each of you for the splendid testimonial at our dinner in May and I want to let you know how deeply honored I feel. In the course of public life one attends many such dinners, for one person or another, but one must experience the honor himself to fully appreciate it. Your kind expressions of good will, the beautiful watch and brief case and the memory of this friendly gathering will remain with me, and my family, for many years to come.

While it is true that I *am* giving up the active management of the Institute I am in no sense leaving. For the past ten years I have been carrying on the duties of Secretary as well as those of Director and in view of the increasing burdens of management it has seemed best to divide the responsibilities of the two offices. So, for a time, at least, I shall continue as Secretary, and as a member of the Board of Trustees.

I want to extend a hearty welcome to our new Director, Dr. James L. Whitehead. By training, experience and personality Dr. Whitehead is eminently qualified for the position and deserves the confidence and wholehearted support of each of us. Under his able guidance we may expect the Institute to reach new heights as it moves forward into its seventh decade of service to our community.

My own term as Director has marked the transition from the personalized organization of our founders to a truly corporate body,

which can more efficiently perform the duties demanded of a modern cultural institution. In this process we have organized the Institute into both group and individual memberships, with an Institute Council acting as coordinator.

The rights and privileges of group membership are clearly set forth in our by-laws and indicate the direction and opportunity for institutional growth. That this approach is fruitful may be seen by the growth of membership in the past ten years, from ten to 16 groups and from 188 to 890 annual members. The important factor, however, is not so much growth in numbers, but rather the support given to the institution by the officers and active members of these groups. Our annual Open House is possible only because of this cooperation, and our exhibitions, publications and programs are increased and their usefulness extended.

The Woman's Auxiliary has also expanded and now numbers 450 devoted and unselfish members. We have to rely on the Auxiliary constantly and have always received prompt and ready support for all our activities. Without the Auxiliary we could hardly function as an institution. Mrs. Fred F. Richardson retires as President of the Auxiliary this year and I owe her a very special "thank you".

The staff, too, has grown and has been organized into somewhat flexible departments, with specific duties assigned to each. The most noticeable growth has been in our Department of Education which was organized with the encouragement of Dr. I. Victor Burger, our former Assistant Superintendent of Schools, to provide Staten Island sources for in-service teacher credit. The assistance given by Dr. Burger has been generously carried on by his successor, Miss Mary M. Blair, for whose help we are much indebted.

The museum building is being used much more extensively and is open evenings. We have also added the William T. Davis House as our offices and library.

I should like to pay a special tribute to our staff. Museum salaries are never high and ours are perhaps the lowest in the metropolitan area. Working conditions are far from ideal. Hours are varied, frequently long, and much has to be done on week-ends, on holidays and in the evenings. We are very cramped for working and exhibition space. One bright spot has appeared, the extension of social security benefits to museum workers and I am gratified that we have become a part of the system at the earliest possible opportunity.

The chief role of the staff in an organization such as ours is one of helpful guidance, assisting others to grow in satisfactions and accomplishments in their chosen fields. This calls for a different type of leadership, one which is indirect, time consuming and often exasperating. Our own satisfactions must come from the success of others, rather than a concentration on our own fields of specialization.

Finally, our staff, like the Puritan mothers, has had the increased burden of putting up with a "Puritan father" who must have been a great trial at times during the past ten years. I want the staff to know that I appreciate the splendid cooperation and true spirit of service which has characterized each individual during my term as Director.

We are cognizant, too, of the importance of the City of New York to our institution. Ten years ago the City contributed a major share of the financial support of the Institute and while, in the meantime, we have increased the ratio of private support we are still very much a public tax-supported institution. In keeping with this duty to the public the Institute has endeavored to be an increasingly useful community organization, concerned with Staten Island's needs and ways of helping to meet them. In addition to regular services the staff has given generously of its time to a variety of community activities, believing, as good public servants, that we must give back at least as much as we have received. While I have been Director I have received kindly support from City officials, particularly Mayor Vincent R. Impellitteri, Commissioner of Parks, Robert Moses, our Borough President, Cornelius A. Hall, and the Budget Director, Thomas J. Patterson. I owe special thanks to our examiner, William C. Fitzpatrick, who has for ten years guided my steps in the intricacies of municipal government. We, in the Institute, are sorry to learn that Mr. Fitzpatrick is retiring on the same date as I am, and we wish him a happy retirement.

In conclusion, a word to the Board of Trustees. During my term as Director, you have been most cooperative and have encouraged the purposeful development of the Institute. Both Dr. James P. Chapin and Mr. Manuel J. Johnson, under whose presidencies I have had the good fortune to serve, have been towers of strength, and sometimes of refuge. The other members of the Executive

Committee, Dr. Frank A. Strauss, Mr. Robert M. Leng and Mr. Joseph F. Burke have been with the institution during my entire term and have been most generous with their time and energy. To the entire Board I extend my thanks for your many kindnesses.

I consider it a great privilege to be able to continue to serve the Institute as a member of the Board and as Secretary.

TREASURER'S REPORT

For the Fiscal Year Ended April 30, 1951

ROBERT M. LENG

Statement of Fund Balances

	<i>Balances May 1, 1950</i>	<i>Increases</i>	<i>Decreases</i>	<i>Balances Apr. 30 1951</i>
Nathaniel L. Britton Fund:				
Principal	\$ 29,161.57			\$ 29,161.57
Income	849.06	\$ 774.74	\$ 660.87	962.93
William T. Davis Fund:				
Principal	212,904.78	7,697.43	.57	220,601.64
Income	1,538.88	6,535.50	5,782.76	2,291.62
John J. Crooke Fund:				
Principal	2,000.00			2,000.00
Income	45.90	90.00	59.96	75.94
Building Fund	20,110.00	25.00		20,135.00
Endowment and General Funds:				
Principal	17,766.44	5,085.39		22,851.83
Income	2,339.16	5,194.97	5,307.32	2,226.81
Special accounts:				
Dues received in advance	133.00	(121.00)		12.00
Oratorio Society	(73.55)	1,454.50	1,186.50	194.45
Art Section	434.69	157.70	408.51	183.88
Camera Club	9.00	229.26	190.11	48.15
Craft Section		177.06	177.06	
Museum Classes		2,885.20	2,638.20	247.00
Annual Dinner		115.00		115.00
	<u>\$287,218.93</u>	<u>\$30,300.75</u>	<u>\$16,411.86</u>	<u>\$301,107.82</u>

Represented by:

Securities held by Institute:

U. S. Treasury Bonds	\$ 65,700.00
Other	8,627.14

Securities held by City Bank Farmers Trust Co.:

U. S. Treasury Bonds (face amount \$214,000.00)	216,371.85
Bonds and mortgages	\$21,044.86
Less — Reserve	21,044.86

Bonds and Mortgages held by Lord, Day & Lord

Cash held by Institute

Checking account	\$ 3,502.29
Savings account	4,433.49
Petty Cash	50.00

Cash held by City Bank Farmers Trust Co.

Nominal value of equity in Museum building, exhibits and fixtures

1,000.00

\$301,404.80

Deduct — Liability for income and payroll taxes

296.98

\$301,107.82

Analysis of Changes in Funds For the Fiscal Year Ended April 30, 1951

		<i>Increases</i>	
Principal:			
Amounts realized from Davis Fund mortgages, etc.	\$	7,697.43	
Contribution to Building Fund		25.00	
Louise Kreischer bequest		5,000.00	
Gain on security transactions		85.39	\$ 12,807.82
Income:			
From securities and cash held by Institute	\$	2,058.85	
From securities held by Lord, Day & Lord		116.85	
From securities held by City Bank Farmers Trust Co.		6,220.58	
Dues from members		2,335.00	
Dues from affiliated societies		105.50	
Contribution from Woman's Auxiliary		600.00	
Fees from Museum classes		260.35	
Advertising in publications		115.60	
Commissions from Museum shop sales		196.74	
Commissions from Davis biography sales		207.34	
Other miscellaneous income		245.40	\$ 12,462.21
Other accounts:			
1951-52 dues received in advance	\$	12.00	
Oratorio Society receipts		1,454.50	
Camera Club receipts		229.26	
Craft section receipts		177.05	
Art section receipts (including Life Class).....		157.70	
Other Museum classes receipts		2,885.20	
Receipts for annual dinner		115.00	5,030.72
			<u>\$ 30,300.75</u>

		<i>Decreases</i>	
Principal:			
City Bank Farmers Trust Co. expenses		\$	.57
Income:			
Publications	\$ 1,321.75		
Museum operating expenses	4,268.56		
Salaries:			
Director	1,200.00		
Treasurer	250.00		
Curator of Davis collections	329.25		
Public Relations	550.00		
Museum clerk	1,180.00		
Museum watchman	90.00		
Davis Memorial lectures	963.23		
City Bank Farmers Trust Co. commissions	260.42		
Legal fee — Davis Trust accounting	250.00		
Natural science research	20.13		
Books, subscriptions, etc.	59.96		
Britton Cottage expenses	878.86		
Purchase of field glasses	135.00		
Purchase of piano	53.75	\$ 11,810.91	
Other accounts:			
Oratorio Society expenses	1,186.50		
Camera Club expenses	190.11		
Craft Section expenses	177.06		
Art Section expenses (including Life Class)....	408.51		
Other Museum classes expenses	2,638.20	4,600.38	
		<u>\$ 16,411.86</u>	

THE WOMAN'S AUXILIARY

HELEN J. ANDERSON

The meetings of the Auxiliary are held on the last Wednesday of each month from October through May, and the Executive Board meets on the third Thursday of each month.

The Annual President's Reception and Tea was held at the Museum on October 26. Our guests included some of our past presidents and presidents of many of the women's clubs on Staten Island. A musical program was presented by the Amphion Male Quartette, and Mrs. Pearl Farmer Richardson, vice chairman of the Speakers' Research Committee for the United Nations, spoke.

Musical programs during the year were represented by Mrs. Olga Kaufman, pianist; Mrs. Clare H. Brown Jr., contralto, accompanied by Mrs. Thordis J. Emile; the Davenport Duo, accompanied by Owen Anderson; and Miss Marcella Geon who told the story of the opera "Carmen", the principal arias being sung by assisting artists.

Programs presented by Mrs. Jacob Flatow, Program Chairman, during the year included Mrs. Pauline Titus Woodruff, author of "How to Conquer Shyness"; Mrs. Walter C. Langsam, who spoke on the United Nations; Mary Jane Bowles, whose topic was "Current Books for Reading Pleasure"; and Mr. Nikki Eastman, who is the designer of the "House of Tomorrow". Three films were also presented, "Gotham Pilgrimage" and "Party Line" by the New York Telephone Company, and "Bermuda Bound".

Following the November meeting the Auxiliary held its annual luncheon and sale, which was again a success. A Duplicate Bridge was held in April to supplement the Annual Card Party held in May. During the summer of 1950 several theater parties and a trip to Lake Success were sponsored by the Auxiliary.

During the year thirty-seven new members have joined the Auxiliary, so that at the present time our membership stands at 443. At the May meeting our President, Mrs. Richardson, presented a check for \$500.00 to Mr. Coles for the Museum.

During the year a complete revision of our Constitution and By-Laws was made. One of the results of this revision is a new election system. Under this system, Mrs. Edward Bungay, 1st Vice President, Mrs. Samuel D. Stickle, 3rd Vice President, Mrs. John W. Stout, Treasurer, and Mrs. Charles Berry, Corresponding Secretary, were asked to serve in their capacities for another year, at which time these offices will be filled for two-year terms. An elec-

tion of three officers took place at the May meeting, and the following slate was unanimously elected: Mrs. Thomas J. Bothwell, President; Mrs. John G. Anderson, 2nd Vice President; and Mrs. William Hammes, Recording Secretary. These three officers will serve for a two-year term.

DEPARTMENT OF EDUCATION

PEARL L. COLES

The department of education was established in 1949 for the general purpose of helping to promote the educational opportunities of the Institute. During the past year 20 courses were given, nine in the fall term and 11 in the spring. Of these, sixteen were for adults and four for young people. Registration was: 183 adults and 60 young people.

Adult courses are accredited by the Board of Education of the City of New York and 57 Staten Island teachers received in-service credit during the year. Our thanks are due to Dr. Jacob Greenberg, Associate Superintendent, and to Miss Mary M. Blair, Assistant Superintendent of Schools for the Borough of Richmond, for their cooperation in accrediting our courses.

As in previous years, two "graduations" were held for those completing adult courses, with demonstrations and exhibits of student work. Miss Marcella Geon was most generous in providing entertainment in the form of excerpts from operas ably sung by her staff. Mrs. Marie S. Conroy, President of the Staten Island Teachers' Association, and Miss Blair were the speakers at our fall and spring receptions respectively. We also welcomed Miss Mary Reilly, representing Dr. Greenberg, at our spring reception.

ART

Section of Art

PERCY A. LEASON

When the Staten Island Art Association became the Institute's Section of Art in 1944, it was given control of all exhibitions in the galleries, subject to general policies laid down by the Board of Trustees of the Institute. During the first year of this period the Section of Art arranged and promoted most of the art exhibits held in the Museum. Within the past year, however, the Section has been responsible only for the annual Spring and Fall and High School Art exhibitions; it hires and pays models for the life classes and arranges landscape outings and such social activities as the annual carnival.

The two chief exhibitions maintained the same average quality and there was the same large attendance at the openings. Because of an excellent start, the life class was changed to a weekly evening instead of a fortnightly one, but this resulted in a falling off in attendance and a return to the bi-weekly meetings.

The Section conducted the usual landscape outings, participated in broadcasts over WNYC, in exhibitions at St. Vincent's Hospital and St. John's Episcopal Church, donated paintings for prizes in charity appeals, and sponsored a series of special lectures which were designed to stimulate realistic discussion of "modern" art.

The carnival was missed by many people, especially those who believe that good art, like good science, depends on the development of disciplined thought; at this pleasant event they could relax for one evening, and, to use a favorite term of "modern" artists, become uninhibited, or comparatively so. But owing to the difficulty of finding a carnival chairman who would shoulder the work and worry of the position, the planned event was dropped for once, and the Section's funds suffered somewhat.

Following are the committees and chairmen for the year:

<i>Exhibition</i>	Alfred McNamara
<i>Education</i>	Joseph Nugent
<i>Art Promotion</i>	Mrs. Ethel Easley
<i>Public Relations</i>	Mrs. Elizabeth F. Nugent
<i>Loan Exhibitions</i>	Mrs. Jean Leason Hitch
<i>Publicity</i>	Mrs. Mary Howe
<i>Entertainment</i>	Mrs. Ester Dahl Tellefsen
<i>Art Sales</i>	Robert A. Hitch
<i>Art Appreciation</i>	Gerald Bernstein

Department of Art

GERALD BERNSTEIN

In keeping with our policy of showing the best available art to our public, the Museum has offered a diversified program for the year. The two art shows sponsored by the Section of Art, the October show for members and the Spring Show open to all Staten Island artists, were of high merit with approximately fifty-five artists exhibiting their works each time.

One-man shows by Percy Leason, President of the Section of Art, and Lloyd Sanford, staff member of the New York Zoological Society, were warmly received. A group show of paintings by Cecil Bell, Warren Robinson, Alfred McNamara and Stanley Jorgensen also aroused much favorable interest.

The Annual High School Art Exhibit, including oils, water colors, and drawings in many media brought forth many encouraging comments, and the art show of our talented children also was greeted with enthusiasm.

At the invitation of officers of Fort Wadsworth, paintings have been loaned to the army post to make the recreation and dining halls more attractive.

In addition to the exhibitions the Museum was also fortunate in having a series of three lecture-demonstrations by Mr. Leason.

With the kind donations of friends of the Museum, our permanent collections are growing, increasing the need for more exhibition and storage space. During the year the following paintings were acquired: A landscape of around 1843 by James Francis Cropsey, given by Mrs. Bessie Cropsey Gillender and Miss Mabel Moore; "Mille Farm, S. I., 1830," artist unknown, and "Night Scene" by Anne Seguine, donated by Mrs. Helen Crocheron Brown; a portrait in oil of George William Curtis, the gift of Mr. Bridgham Curtis and Miss Constance Curtis; crayon portrait of George William Curtis, the gift of G. W. Curtis; "Three Sisters", and "Corner of the Studio" by Percy Leason, presented by Edward L. Love; "Captain W. Speight" by Ida Dudley Dale, given by the St. George Library; "Lambertville Road" by Henry Gasser, N. A., given by Percy Leason; and eleven paintings from the estate of Vena Tompkins Carroll were also received.

Several dioramas were executed during the winter; one of Willowbrook Pond showing the variety of life above and below the water; a typical Staten Island woodland scene with examples of flora and fauna indigenous to our region; and, in keeping with our drive for conservation of our woodlands, a diorama showing the destructive effects of fire.

A display was made to aid the Civil Defense Organization in its membership drive and also the art department cooperated with the United Nations Committee of Staten Island.

The encouraging response of Islanders to our exhibitions is a stimulus for scheduling a larger program for next year with a greater number of art shows, especially of the group-show variety, and lectures, movies and demonstrations.

Section of Handcrafts

GLADYS RENFIELD

The Section of Handcrafts was organized one year ago, with the following general purposes:

1. To promote interest and activities among Staten Island Craftsmen.
2. To widen their interests and increase their competence by classes, lectures and other activities.
3. To carry on exhibitions in the Museum and other places on Staten Island.

We have held monthly meetings, including demonstrations, movies and discussions. There have been four movies and two lecture demonstrations. During the annual craft exhibition in March there were two demonstrations each Sunday, with an attendance of two hundred or more at each. A series of demonstrations also was given at Sailors' Snug Harbor; and in addition to our regular November Craft Sale and March "Crafts for All Ages" exhibit, we have made a number of library exhibits and one church exhibit.

Our affiliation with the American Craftsmen's Educational Council, Inc. gives us contact with a national group and the opportunity to participate with other craftsmen on a national scale.

The lectures and classes have brought new people into our group, and have also improved the quality of the work of members. We hope in the coming year to expand our activities, particularly the rotary exhibits, and encourage members to give lecture demonstrations to other groups, such as the series at Sailors' Snug Harbor.

Section of Photography (Staten Island Camera Club)

FERDINAND OLSON

The Camera Club completed its year of activities with the Annual Dinner on June 23, when the following new officers were installed: President, Herman Gluck; Vice President, William Hunn; Treasurer, Bernard Gluck; Executive Secretary, Miss Carol Beavis; Corresponding Secretary, Mrs. Margaret Kraemer. Wellington Lee, Chinatown studio photographer, spoke on composition, equipment and other elements of success, and showed some of his own prize-winning pictures.

Awards to members were bestowed as follows: Highest point score in black and white Class A print composition, W. R. Flader; also, to Flader, outstanding print of the year; winner of the year-long color slide competition, and outstanding slide of the year, Elliott Chapin; Class B black and white print competition, Bernard Gluck; second place in each of the three groups, Ferdinand Olson, Ernest Kopacska and Gilbert Kleine. Third places were won by Miss Vita Lamarca and Herman Gluck; Thomas Fisher, top performance in color slide sequence competitions.

We have had a rather successful year, not only in securing competent judges and lecturers, but in the quality of slides and prints entered in the competitions. Our point rating in the Metropolitan Camera Club Council is near the top, at which we are particularly pleased.

Articles treating of various phases of photography, written by several of our members, are appearing in national photographic magazines.

Activities will be resumed in September.

Department of Prints and Photographs

DANIEL L. BRIDGMAN

The Museum's collection of prints and photographs has continued to grow during the year now ending. Storage and display are a serious problem. A selection from the prints is maintained on the walls, but an adequate representation of the collection would require much more space than is at present available. Exhibits of historic photographs have been shown from time to time.

SCIENCE

Department of Science

ROBERT MATHEWSON

The presentation of 234 lecture programs to an aggregate of 7623 young people attests to the popularity of this Museum service. The usual number of requests from other agencies,—Boy Scouts, Girl Scouts, Service Clubs, etc., for lecture programs, have been complied with.

Thirty meetings were held by the youth groups, Science Discussion Group, Museum Explorers and Geology Club, during the year. Andrew Schmitt has made excellent progress in developing the program of the Museum Explorers.

The need for more space for Natural History subjects has led to the discontinuance of the Industrial Exhibits which have occupied the north end of the main floor. New Bird, Mineral, Botanical and Indian exhibits now occupy this area.

There has been a great increase in the number of inquiries about household pests and pets, indicating that more and more people are becoming aware of this facet of the Museum's community service.

Two new dioramas, "Aquatic and Terrestrial Wildlife of Willowbrook Park" and "Wild Life Around a Rotting Log" have been completed. The excellent background murals in these dioramas are the work of our Art Curator, Gerald Bernstein. I would also like to take this opportunity to thank Miss Mathilde Weingartner, Lee A. Ellison, Edwin Rundlett, Casimir Redjives and our retiring Director, Roswell S. Coles, for their willing and able assistance in the many problems confronted during the year.

With a great sense of responsibility, your Curator has accepted the appointment of Director of Radiological Defense for the Borough of Richmond. The Museum Building has been designated as headquarters for this operation.

Section of Natural History

CASIMIR F. REDJIVES

The Nature Section has carried on its usual monthly field trips and regular monthly indoor meetings throughout the past year, with constantly increasing attendance. The field trips include all branches of Natural Science, and some were taken outside of the Island for variation and comparison of flora that can be found around New York, yet does not exist on the Island. Places visited were the New Jersey pine barrens, Grasmere bogs, Willowbrook

Pond, Travis Pond and near Forest Hill Road, Clay Pit Ponds, Pleasant Plains, Moravian Cemetery, Barrett and Clove Lakes Parks, Richmond, and Cheesecake State Park in New Jersey. Hosts on some of these trips were Mr. and Mrs. John Plumb, Mr. and Mrs. George Maki, Mr. and Mrs. Casimir Redjives and Mr. and Mrs. Karl Nesslinger.

At the monthly meetings the following programs were presented: Casimir Redjives, "Gaspé"; Dr. James P. Chapin, "Elusive Birds of the Belgian Congo;" Lee A. Ellison, "Gaspé and Its Botany;" Mrs. Alice D. Spear, "Yosemite Valley and the Monterey Peninsula;" I. C. G. Cooper, "The Lure of Algae;" John Pallister, "Florida;" Dr. Leona Emrich, "Guatemala;" Frank Trevor, "Marine Life of the Northeast Coast." Members also had a chance to show their colored slides.

In November the group went on its annual All Day Hike, starting in St. George and ending near Eltingville.

The Museum has acquired three pairs of 6 x 30 binoculars to be loaned to serious Bird Students for field work. They are obtainable at the Davis House.

Due to the efforts of members of the Nature Section the city is obtaining for a natural park the area of the Clay Pit Ponds in Greenridge. The filling in of this area with "landfill" has been stopped, and the Section will attempt an ecological study of it in the near future.

The Police Department has promised to cooperate in stopping the shooting of wild life in our Borough.

Our members have turned in numerous fine nature records, such as: brook trout and smallmouthed bass in our streams; winter-green growing in the woodland; Gannets off Mount Loretto; Ruddy Ducks in Willowbrook Pond; Wilson's Petrel in the Upper Bay, and an increasing number of reports of opossums on the Island.

In May, 1951, the chairman of the bird group led four bird walks to various parts of the Island to study migratory birds. A Christmas bird count was taken in December and a nesting bird count in June. Throughout the year reports have been made on the rarer birds that have visited the Island.

The botanical branch has been making extensive studies of the flora in given places, such as Buck's Hollow. Study group meetings have done intensive and very educational work on the study of the Island's flora.

Officers of the Section of Natural History are: President, Casimir F. Redjives; Vice President, Mathilde P. Weingartner; Corresponding Secretary, Mrs. John Plumb; Recording Secretary, Mrs. Elwood Cole; Field Secretary and Treasurer, Karl O. Nesslinger.

The Davis Collections

ROBERT J. O'CONNOR

During the past year the work on the Davis Collections, as previously outlined, has been continued. The work has progressed slowly because of the great amount of material and the necessity for transferring many specimens to new and more permanent boxes. However, this has not been the greatest problem. As usual it has been the lack of space in which to work.

There are some 4000 or 5000 specimen boxes in the Davis Collection of which about 300 are pasteboard. These will eventually have to be replaced by more suitable containers. These boxes are jammed into every available space in the attic so that much re-handling is made necessary in the re-arranging, cleaning and the putting of naphthalene in all these boxes. The major portion of this part of the care has been completed.

The Coleoptera (beetle) collection comprising approximately one-half of the above number of boxes has been completely re-worked and systematically arranged at one end of the attic according to the system set forth in Leng's catalogue. This comprised the bulk of last winter's work. All that remains to be done, as far as the beetles are concerned, is to put new labels on many of the boxes. The labels put on by Mr. Davis are rapidly becoming illegible due to the accumulation of dust of many years plus browning of the paper on which the names were written. This latter task will take a long time because roughly two-thirds of all the boxes must be re-labelled.

Several of the other orders of insects in the collections have also been re-worked and are ready for use by anyone desiring to refer to the collection. These include the odonata, the lepidoptera, the diptera and hemiptera. There now remain several sections of shelves containing miscellaneous material collected by Mr. Davis. This will have to be gone over box by box and then assigned to its proper storage place in the museum.

It is hoped that, when this work in the attic is completed, museum members as well as others interested in Natural History will take advantage of the opportunity to use the Davis Collections.

THE STATEN ISLAND PHILATELIC SOCIETY

WILLIAM F. HOBBS

As retiring President of the Staten Island Philatelic Society I am glad to be able to report that our year has been successful. We have gained some new members, are financially solvent, and have carried on numerous activities.

Our monthly auctions have been conducted by Thomas A. Watson, who has proved himself a capable auctioneer. Our Christmas Party was held under the guidance of Mrs. Clara Given, hostess, and Alexander Findlay, entertainment chairman. Our Annual Stamp Exhibit was held during the month of February, Walter Kuhn Chairman, assisted by Henry Kraemer. The Annual Dinner took place April 23 at the Riviera Chateau, with Elliott Burgher as Chairman and Mr. and Mrs. Frank Given as honor guests. The Elliott Burgher Trophy was presented to Henry Kraemer for his outstanding collection shown in the Annual Stamp Exhibit.

The Society has at last obtained a seal. It is a replica of the three-cent Staten Island Express Post stamp, together with the date of the founding of this Society. The Society now also owns a gavel, presented by Charles J. Stork.

Officers elected for the coming year are: President, Alexander Findlay; Recording Secretary, Silvio Marcovecchio; Treasurer, William McFarland; Board of Governors, Henry Kraemer, Elliott R. Burgher.

MUSIC

Department of Music

HARRY RUSSELL

During the season just ended, the Museum sponsored the following musical activities:

The Staten Island Oratorio Society, conducted by Harry Russell, studied four works in the oratorio repertoire and presented them in public concerts.

Two series of fifteen Opera Lecture Recitals each were given by Marcella Geon, assisted by various soloists singing the roles in the operas presented.

A women's chorus, the Treble Choral Ensemble, under the direction of Marjorie Sunderman, studied Choral Music for women's voices and sang at various concerts in the community.

Two courses, one in Music Appreciation, and the other in Elements of Music, were given by Margaret Graves. Also, a course in Recorder Playing was given at the Richmond Instituté of Musical Art which is affiliated with the Museum.

Oratorio Society

ELSIE COLE

A very successful 1950-51 season of the Oratorio Society has brought to the general public and to the members of the group a fine program of choral singing.

The Society took part in the Open House of the Museum by exhibiting a collection of programs of music performed since its inception. Also included were miniature busts of composers.

At the yearly Christmas concert arranged by the Museum, the Oratorio Society sang five selections from Handel's Messiah.

Two major programs were performed this year. The first one, on March 3rd was a cantata, "Rosamunde" by Schubert, and an oratorio, "The Erl-King's Daughter" by Niels Gade. Soloists were Miss Elaine Pendrell, soprano; Mrs. Patricia Kirkley, contralto; and Carl Larson, baritone. Thirty-seven voices took part in this concert.

On June 2nd forty voices sang in our second concert when a performance of the oratorio "The Crusaders" by Niels Gade was given. The soloists were Mrs. Patricia Kirkley, contralto; John Collins, baritone; and Frank Richardson, tenor. Both concerts were under the direction of Harry Russell, Musical Conductor of the Society, with Mrs. Betty Thomson Kacik as piano accompanist.

On May 19th the Society sang two numbers from the cantata "Rosamunde" at a tea given by the Symphony Orchestra Auxiliary at Dongan Hall.

At the annual election of officers on June 6th the following were elected:

President, Arthur Dean; Vice President, Richard Simmons; Treasurer, Mrs. Frederick C. Foote; Secretary, Miss Audrey Burtner.

Treble Choral Ensemble

MARJORIE L. SUNDERMAN

The Treble Choral Ensemble has been meeting every Tuesday for rehearsals at the homes of its members. During the year we participated in the annual Christmas concert given by the Institute at McKee Vocational High School; some of our members gave an afternoon concert at the New Dorp Moravian Church during the Christmas holidays; we took part in a program sponsored by the Academy of St. Dorothy in May; our annual Spring Concert was given at Public School 14, Stapleton, in June, for the benefit of the School Fund; and we joined with Margaret Graves, violinist, and the Staten Island Chamber Music Society in a concert at St. Alban's Church, Eltingville, for the benefit of the Blood Bank of Richmond Memorial Hospital.

Our President is Mrs. Robert Wylie; Secretary Miss Louise Floeser, and Treasurer Mrs. Roy Greet.

Richmond Institute of Musical Art

MARGARET GRAVES

In its first year of affiliation with the Staten Island Museum, the Richmond Institute of Musical Art presented two courses at the Museum,—Music Appreciation, for adults, and Elements of Music, for pre-school children, and one course at the School,—an adult class in the recorder, conducted by Miss Eleonore Scovill.

The Richmond Institute also presented the Staten Island Chamber Music Society in three concerts during the winter of 1950-1951; one at Grace Methodist Church, one at St. Alban's Church and one at Woodrow Methodist Church; also three solo violin recitals by Margaret Graves at the School.

The faculty of the School, and the Chamber Music Society, played at the Museum's Christmas Concert and its winter graduation exercises.

HISTORY AND LITERATURE

Department of History and Literature

MABEL ABBOTT

This Department has continued to operate the Library, edit the *Proceedings*, handle sales of publications and conduct the exchange of publications with other institutions.

The Curator spoke at the meeting of the Staten Island Poetry Society, February 17, on great poets who have lived on the Island, and at the luncheon of the Rotary Club, May 29, on Staten Island writers.

Library

Owing to lack of shelf-room, only such additions to the library in the Davis House have been made as can be justified by definite usefulness. The facilities of the Library are in frequent use by research workers, students, and of course the Institute's staff.

The George William Curtis Collection has received accessions of importance, which are listed elsewhere. A supplementary inventory of the Collection appeared in the April *Proceedings*.

Scientific periodicals are accumulating, through exchange of publications. Current periodicals are kept at the Davis House for staff use and for general reference, and back numbers are added to the files in the attic of the Museum building. This highly important part of the library is unable to perform its full function, being almost inaccessible for lack of space.

Local History

In-service courses in local history, under Charles Coleman Stoddard, were given both in the Fall and Spring.

Elliott Burgher, Research Associate in Local Ethnology, has spoken on "Indian Life on Staten Island" on the following occasions:

October 5, 1950, to the Bethel Methodist Men's Club, at Bethel Methodist Church; October 25, to students from Sacred Heart School at West Brighton Branch Library; October 26, to Cub Scout Pack 31, and their parents, at Public School 45; February 6, 1951, to Aquehonga Lodge No. 906 F. & A.M., at Stapleton; April 12, to Cub Scout Pack 18 and their parents, at the Jewish

Community Center; May 24, to Boy Scout Troop 7 and their parents at the Rossville Community House.

Mr. Burgher also was guest speaker at the Sixth Annual Father and Son Dinner of Cub Pack 31, in Port Richmond, on which occasion his subject was "Staten Island Ferryboats that Went to War."

Total attendance at these meetings was 625.

Section of Literature (Belles Lettres Society)

MARIE B. SUTTER

Eight regular meetings were held by the Belles Lettres Society during the season of 1950-1951. Six of these were at the homes, respectively, of Isidore Delson, Thomas H. Philips, Willard M. Grimes, Dr. Bengt Hamilton, William A. Lumsden and Miss Emily Kolff. One was held in the Edwin Markham Memorial Library at Wagner College, and one at the Museum of the Staten Island Historical Society in Richmondtown. The Annual Dinner, in March, was held in the Christmas Tree Inn at Prince's Bay, and the Annual Picnic, in June, at the home of Hartley L. H. Smith. Attendance throughout the year was most gratifying.

Two new members were received, Dr. and Mrs. Kenneth Scott.

The constitution was amended to change the term "resident members" to "active members," and to form a new classification to be known as "associate members."

Under the direction of President Raymond Safford, the project of recording the voices of members has been continued. These recordings now furnish entertainment at occasional meetings, and are becoming invaluable souvenirs of members who have passed away.

Two visiting speakers were heard,—Professor Virgil Markham on "The Mystery Story," and Herbert T. Magruder, who presented a paper purporting to describe a visit by Jenny Lind to the old Pavilion Hotel. At the joint meeting of the Belles Lettres and Staten Island Historical Societies, members of the two groups presented a pageant of costumes dated from 1820 to 1920. At the Annual Dinner, persons and events of the first half of the Twentieth Century were impersonated by members.

A collection of poems entitled "McCulloch Musings" was published by Dr. E. C. McCulloch, the authors being the doctor himself, his father and his son.

Officers for 1951-1952 were elected as follows:

President, Mrs. William A. Lumsden; Vice President, Mrs. Leslie Carter; Recording Secretary, Mrs. Raymond Safford; Corresponding Secretary, Mrs. Lester Callan; Treasurer (re-elected), Thomas H. Philips; Historian (re-elected), Lester L. Callan.

Fortnightly Club

MRS. CHRISTOPHER STEADMAN

The Fortnightly Club of Staten Island is made up of members interested in the study of literature, travel, biography and autobiography, and in the production of original papers, poetry and music.

Our sixty-first year began with a talk on "The United Nations" by a guest speaker, and closed with an afternoon of music written by the "Four B's"—Bach, Beethoven, Brahms, and Béla Bartók.

The officers: Miss Annie Davison, President; Mrs. John W. Dreyer, First Vice President; Mrs. Willard M. Grimes, Second Vice President; Mrs. Stephen J. Botsford, Treasurer; Miss Florence Palmer, Corresponding Secretary; Mrs. Christopher Steadman, Recording Secretary. Directors: Mrs. L. Barrett-Smith, Miss Ethel O. Blampied, Mrs. David Parke, Mrs. John A. Swett.

Staten Island Poetry Society

THYRA H. JOSSELYN

The Society meets in the Board Room of the Borough Hall, by courtesy of Borough President Cornelius A. Hall, at 8 p.m. on the first Wednesday of the month, from September to June.

Officers are: President, Dr. Thyra H. Josselyn; Vice President, Dr. E. C. McCulloch; Corresponding Secretary, Mrs. Naomi Marcato; Treasurer, Frank D. Cicatello.

The programs for the past year, under the direction of Dr. McCulloch, have included talks on Indian Poetry by Dr. Josselyn, Chinese Poetry by Mrs. Grace E. Clark, and Italian Poetry by Mrs. Carmela Inglima.

Lessons in the technique of English verse have been given by Dr. McCulloch, and contests have been held in which the writers apply the lessons.

The annual banquet was held in February, and a picnic at the home of Mrs. Inglima on June 10. October 15th has been established by State and City sanction as Poetry Day, and the Society took part in the celebration, in Borough Hall.

Among the Society's many activities has been the giving of prizes to school children of the Island for poems. Publications by members this year include "*McCulloch Musings*,"—a booklet of poems by Dr. McCulloch, his father and his son,—and "*This Laughing Dust*", by Lucile Coleman. Mrs. Coleman also conducts a column of poetry in the Staten Island *Transcript*. Mrs. Coleman, Mrs. Walter B. Griffith and Mrs. Inglima, and other members, have been winners in contests given by other groups, and Mr.

Louis J. Roehmer, Mrs. Inghima, Mrs. Coleman, Mrs. Liboria Romano, Dr. McCulloch and others have had poems published in magazines throughout the country.

Staten Island Italian Historical Society

DANIEL SANTORO

Since the date of our last annual report, the Society has been exceedingly busy, as will be seen from the following partial list of its activities:

Five dinners have been given, as follows:

July 30, 1950, 100th anniversary of Garibaldi's coming to the Island. October 11, 1950, Columbus Day. December 13, 1950, in honor of Verrazzano. January 2, 1951, on the occasion of the launching of the ferryboat "Verrazzano." April 16, 1951, in honor of Antonio Meucci.

Eleven broadcasts were given over radio Station WHOM, and one from the Staten Island Museum.

Articles by Daniel Santoro and John A. Rallo have appeared in various magazines and numerous newspapers. Many copies of historical leaflets, booklets and pictures have been distributed to members, museums, libraries and historical societies. Research is being conducted on the activities of Americans of Italian origin in churches, in World War II and in many other fields. Representatives of this Society have spoken at many meetings of other organizations. A bibliography of books on persons of Italian origin is in preparation.

Undertakings contemplated for the coming year include the sponsoring of classes in Italian; distribution of cards with information concerning outstanding Americans of Italian origin; continuance of talks on historical and cultural subjects; trips to the Metropolitan Museum and the American Museum of Natural History for school children; and a campaign to rehabilitate the building in which Garibaldi lived on Staten Island. Dinners in honor of Garibaldi and on Columbus Day are scheduled, and two dances are to be given.

The Staten Island Italian Historical Society has joined the United Nations Committee of Staten Island and took an active part in the Folk Festival at the Curtis High School April 25th.

Literature Relating to Staten Island

Shantymen and Shantyboys, by William Main Doerffinger. The Macmillan Company, 1951.

As handsome and enjoyable a volume as has reached book-counters in a long time is William Main Doerffinger's "Shantymen and Shantyboys," a splendid collection of songs sung by sailormen in the North Atlantic, and of ballads of American and Canadian lumbermen. Students of Americana and of folk-music will find it

probably as nearly definitive for the regions represented as a collection can be; and for Staten Islanders it has a particular and local interest, because Mr. Doerflinger's family has been long and well known here, and he received his early education here and collected some of his finest songs at Sailor's Snug Harbor.

Like most really satisfying draughts, this one has been a long time a-brewing. Mr. Doerflinger was only sixteen when he worked his way to Europe as a deck-boy. He collected sea songs and balladry in connection with his English studies at Princeton, and continued on a fellowship after graduating. He went from New York to Miramichi Bay on a lumber schooner; and early and late he hung around Sailor's Snug Harbor and coaxed the old salts to sing for him. Meanwhile, he collaborated with Roland Parker on a novel of the old slave-trade, "The Middle Passage," and was for a time an editor for the Macmillan Company, and managing editor of the American Mercury. Just now he is an attaché at the United States Embassy in Rome. But the collection kept growing all the time, and now it is between covers, for the permanent joy of all who love the flavor and sting of spontaneous music and the record of a part of American life.

"Christopher Pearse Cranch and his Caricatures of New England Transcendentalism," by F. DeWolfe Miller. Harvard University Press, 1951.

This small and attractive book would have been a major sensation in American literary circles if it had been published a hundred and twenty years ago, which is about the time that much of it was put on paper. Christopher Pearse Cranch, clergyman, poet and painter, friend of George William Curtis, and at one period and probably more than one, a resident of Staten Island, did a daring thing when he poked fun at Emerson and the Transcendentalists. Whether by friends or critics, they were usually referred to with tremendous solemnity. But Cranch, who is said to have been serious and even melancholy in manner, was known to his friends to have a sense of humor which occasionally broke out in a comic song or recitation, to the great astonishment of anyone who knew him only as a poet of genius or a painter of recognized distinction. He was himself warmly in accord with the high ideals of the Transcendentalists, but he could not resist turning the searchlight of fun on some of their mystic utterances.

Only two of the cartoons now collected and published by Harvard University Press have ever been published before. The brief biography that accompanies them is an interesting glimpse of an unusual character, though it does not help local historians in their search for the exact dates and addresses of his residence here. Undoubtedly he lived in or near New Brighton or West New Brighton, but thus far nothing more definite has been found.

Cranch was the companion of Curtis on part of the trip to Europe which resulted in Curtis's first two books, and was his close friend for many years. The two men died in the same year, 1892.

M.A.

Richmond County Chapter, New York State Society of

Professional Engineers

RAYMOND F. REDDY, P.E.

Officers elected at the Annual Meeting in January were Hugo H. Stenberg, President; Michael Pisetznar and Lawrence Larsen, Vice Presidents; Raymond J. Reddy, Secretary; Patrick J. McCarthy, Treasurer; Frank G. Cosmen and Mark C. Milnes, Directors for three years. Installations by Past State President William H. Larkin. During the year Speakers discussed subjects of current interest to the community.

Smog

William H. Byrne, Past Director of Smoke Control for New York City and present head of an Industrial Engineering firm and William G. Christie, Director of Bureau of Smoke Control, Department of Housing and Buildings, New York City. The Bureau can only control fumes from fuel, which leaves industrial smogs outside their jurisdiction. The Chapter is supporting a movement to establish a tri-state committee to control the smog.

Sewage—Treatment

A vital need for the expanding sections of Staten Island, reported on by Commissioner Frederick H. Zurmuhlen, Department of Public Works, City of New York.

Defense

Frank G. Cosmen, Chairman, Captain Lewis H. Rabbage, Chief Engineer of Department of Marine and Aviation spoke on "Port Defense," stressing the wide spread of fire under bombings. Commissioner Frederick H. Zurmuhlen, head of Public Works Engineering Divisions, described organization of units in utilities, industry and labor fields.

Borough Planning

Explained by President Cornelius A. Hall of the Borough of Richmond.

Engineers' Week

The Borough President, by proclamation, dedicated the week of February 19 to 24, in honor of George Washington, as Engineers' Week.

Social Affairs

A Beach Party was held at Butler Manor in July, Frank G. Cosmen and B. Kadin, Chairmen, and the Annual Dinner Dance at the Meurot in February, C. Ettlinger, Chairman.

During the year the Chapter lost by death Victor H. Reichelt, Charter Member, who gave loyal and untiring service to his fellow engineers.

Accessions

In addition to the accessions listed in the *Proceedings* throughout the year, we have received since the date of our last number an unusual number of gifts, only a few of which can be enumerated in detail, but for all of which we are deeply grateful. Among the outstanding items must be mentioned an oil painting of George William Curtis by A. Perkins, the gift of Mr. Bridgham Curtis and Miss Constance Curtis of Manhattan; crayon portrait of George William Curtis, (name of artist not visible but believed to be by Samuel Lawrence) gift of G. W. Curtis; cut glass punch bowl, presented by Mrs. W. Lynn McCracken; a Bavarian head-dress said to be 200 years old and a Japanese scarf said to be 100 years old, the gifts of Mrs. Marie S. Stumpp; a quantity of silver from the estate of the late Mrs. Camille McSorley, presented by Miss Anna Dobson; a letter from Mrs. George William Curtis to the late Cornelius G. Kolff, the gift of Miss Emily Kolff; 22 drawings, "Morphology of Plants" by the late Charles Ericson, given by his daughter, Mrs. Casimir Redjives; and the recent book "Shanty-men and Shantyboys," by the Staten Island writer William Main Doerflinger, presented by the publishers, the Macmillan Co. The complete list of donors follows:

Donors

Vincent Argenziano	Carl Olaf Heise
Austrian Consulate General	Mrs. Jessie M. Kelly
Banco de Venezuela	Miss Emily Kolff
Mrs. George F. Baker	The Macmillan Company
Mrs. Lucile Coleman	Mrs. W. Lynn McCracken
Bridgham Curtis	Dr. E. C. McCulloch
Miss Constance Curtis	Leslie J. Magee
G. W. Curtis	Mrs. Casimir Redjives
Miss Anna Dobson	Mrs. Marie S. Stumpp
Charles Ericson	Dr. Aline Werner
Mrs. Emma L. R. White	

NEW MEMBERS

We welcome the following new members who have joined us since the date of our last *Proceedings*:

Mrs. Mary A. Bannon	John Pilgrim
Leslie David Bellows	William A. Reagan
H. Harry Benedict	Frank M. Roth
Mrs. Marion Hepner	Mrs. Diana E. Silverstein
Mrs. Nora S. Knobel	Paul Teschakis
Mrs. Emma Lathrop	Sebastian Trovato
Samuel Meyerson	Claude L. Turner
Mrs. William J. Morgan	Samuel Wolf

NECROLOGY

During the year now ending, we have lost by death the following members: William L. DeBost, John J. O'Rourke, Mrs. Dagmar Johnson, Robert C. Stanley, Mrs. Ramona Michener, Miss Agnes C. Nash, Clermont C. Covert, Hiram C. Horton, Mrs. Agnes V. Miller and Elias Bernstein, whose names have been recorded in our *Proceedings*. Since the appearance of our last number, we have regretfully to add the names of

Miss Charlotte Smith, 353 College Avenue, Westerleigh, died March 20. She had been a resident of the Island since 1904, and a member of the Institute from 1919 to 1949. She taught in the Staten Island public schools until her retirement, 17 years ago. She was one of the oldest surviving members of the Alumni Association of Cortland State Normal School, Staten Island Chapter, D.A.R., of Immanuel Union Church, Westerleigh, and of the Woman's Auxiliary of the Institute of Arts and Sciences.

Victor H. Reichelt, who until the last two years lived at 287 Wardwell Avenue. He was a member of the Institute from 1910 until 1949, when he removed to Upper Montclair. He died March 29, at the home of his daughter in Montgomery, N. Y. Mr. Reichelt, who was for many years senior engineer in the Borough President's office, had been a member of the Institute from 1910 to 1949. He was a member of the Richmond County Chapter of Professional Engineers, and of other professional and also civic groups.

Miss Emilie O. Long, 44 Chester Place, Tompkinsville, a member of the Institute since 1931. Miss Long who died March 29, was a professor of botany at Hunter College from 1898 to 1933, when she retired and devoted herself to the work of the Alice Rich Northrop Memorial Camp, of which she was President.

Mrs. Norman Stewart Walker, daughter of the late Erastus Wiman, prominent in the development of the Island a generation ago, died April 5 at the home of her daughter, Mrs. Maurice L. Pitou, 204 Davis Avenue. She had been a member of the Institute from 1919 to 1925. She was also a member of Christ Episcopal Church, and of the State Charities Aid Association.

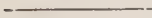
Charles Ericson, of Brooklyn, whose summer residence for many years was at 305 Sprague Avenue, Tottenville, died April 16. He had been a member of the Institute since 1943, and was Chairman of Botany in its Department of Natural Science. He was a sanitary engineer, and was Vice President of the Natural Science Division of the Brooklyn Institute of Arts and Sciences.

Henry A. Ahrens, 96 Louis Street, died May 7. He had been a member of the Institute since 1917, and a resident of the Island since 1908.

Martin Reed Porter, 3 St. Austin's Place, West Brighton, who died May 28. He had been a member of the Institute since 1917, and a resident of the Island since infancy. He was a veteran of World War I, and a member of the Richmond County Country Club and was Treasurer of the Unitarian Church at New Brighton for twenty-two years.

Henry J. Murray, a member of the Institute for 31 years, and leader of its Junior Stamp Club, died May 17. Mr. Murray was an elder of the Brighton Heights Reformed Church, and treasurer of the Student Aid Society of the Borough of Richmond for 25 years.

George C. Hall, of Westerleigh, retired President of the Staten Island Savings Bank, died June 26, at his summer home in Maine. Mr. Hall was born on Staten Island, and was a member of the Richmond County Country Club and other social, civic and church organizations.



FORM OF BEQUEST

I hereby give, devise and bequeath to the Staten Island Institute of Arts and Sciences, Staten Island, New York, the sum ofto be used, (or the income from which to be used) for the work (or a specific purpose) of the Institute.

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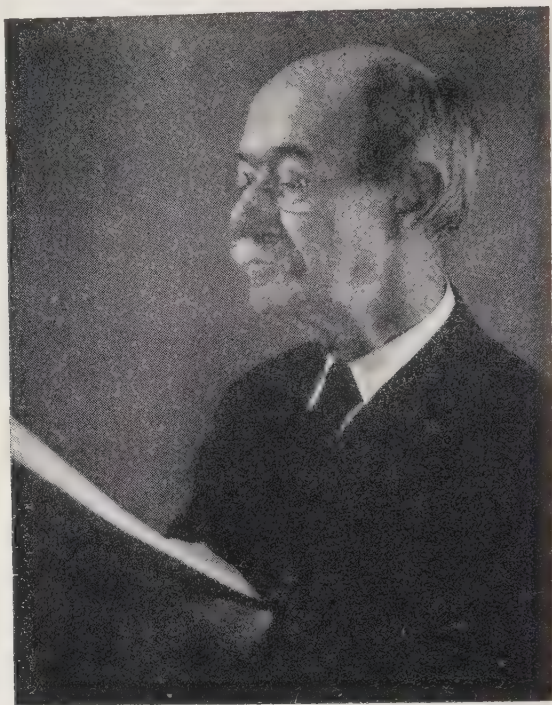
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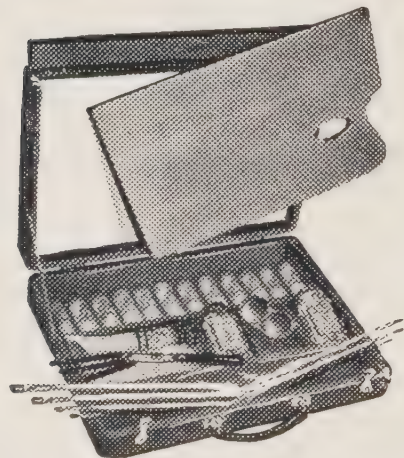
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Proceedings

of the

STATEN ISLAND

INSTITUTE OF ARTS

AND SCIENCES

Volume XIV

Spring 1952

Number I

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**Volume XIV • Number I
*Spring 1952***

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PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES. Vol. XIV, Spring, 1952. Published semi-annually in spring and fall by the Staten Island Institute of Arts and Sciences, 75 Stuyvesant Place, Staten Island, N. Y. Subscription fee \$2.00 per year, included in annual membership fee of \$5.00. Mabel Abbott, Editor

SMALLER TREES FOR SMALLER HOMES

EDWIN RUNDLETT

According to census figures, Staten Island's population increased 10% from 1930 to 1940, and 9.8% from 1940 to 1950. By 1950 it had reached a total of 191,555. Growth is continuing, as indicated by the building boom now under way. Vacant lots are fast being occupied by new dwellings, mostly for one or two families. Farms, fields and woodlands are giving way to the relentless push of bulldozers.

Noticeable also is a change in architectural styles. The big wooden mansions of yesteryear are disappearing. People now choose to live in much smaller houses, often only one story in height. More bricks and cement blocks are being used, less wood.

The older streets, wherever practicable, are being mapped for increased width, a 60-foot width replacing the old standard 50. Major arteries call for 80-foot widths, or even more. This means reducing the depth of house lots, or the width of sidewalks.

These are conditions that confront the many new homeowners who are appearing among us. Inasmuch as the average citizen's education in one field has been sadly neglected—the art of planting and caring for the home grounds—we may be sure that some study of that art would be of use to most of our new Staten Islanders, as well as to many who are not newcomers. It takes a garden to make a house into a home; but a garden, without horticultural know-how, is a sweatshop. With adequate training for the gardener, however, it becomes a source of pleasant and healthful recreation.

Styles in landscape planting should change with the lessening dimensions of the houses and gardens. The artist dotes on small cottages beneath big trees—they are so "quaint." They may be quaint to the eye—but ask the man who owns one! Civic agencies receive distress calls day after day from such owners. Here are a few samples:

"Branches keep falling, endangering my children!"

"Termites and ants are entering the house!"

"My electric service lines are threatened!"

"Branches rub the roof and injure shingles and paint!"

"Beetles and caterpillars are all over everything!"

"The foundation is cracking!"

"A sticky drip is destroying the paint and I dare not spray the insects that cause it!"

"My sewer is clogged by tree roots!"

"Fallen leaves make the roof gutters overflow, endangering the siding!"

"My lawn and foundation planting will not grow!"

"My flowers fail to blossom!"

"I have to use the electric light in my living-room at noon!"

Etc., etc., etc.

All this, and more, just because somebody, when buying trees, insisted upon quick shade. Nurserymen delight in selling trees that grow quickly. They bring quick profits.

If only growth could be stopped at will!

There is one way to avoid these difficulties, and that is to buy varieties that at maturity are not too big. There are plenty of such trees, but they are too little known. Let not your children say of you that you lacked foresight in your tree selection. It might be costly to them in health, happiness and money.

Little has been written by landscape architects on the subject of urban gardening. Staten Island is fast becoming urban, whether we like it or not. This article is intended to help those homeowners whose plots are 40 to 50 feet by about 100. People with foresight will avoid planting on such plots trees which grow to immense size, such as Elms, Willows, Beeches, Poplars, Oaks and the large Maples.

These huge trees, when found on larger homesites, should be cherished and nurtured, for they are a precious heritage and add much to the comfort and beauty of any community. It is often possible by a change in plot plan to avoid destroying a tree of great aesthetic value. Remember, however, that a recognized rule among landscape architects is that *no tree should exist within fifteen feet of a house foundation*. The larger the tree-type, the farther it should be from the house, for the good of the house and of the garden and of the occupants of the home.

The following list may prove helpful to those owning small plots but who are unacquainted with available small tree varieties. The specimens referred to are all visible from the sidewalk, so there need be no trespassing to see them. They are not all perfect, mature specimens—just random selections.

Perhaps the most generally useful flowering tree of small to medium size is the Flowering Crabapple, of which there are over two hundred good sorts on the market. These are valued both for their abundant spring bloom and for their ornamental fruits, which vary from pea size to two inches in diameter, and may be yellow, red, purple, or mixtures of these colors.

Among the best of these are: Arnold Crab, *Malus arnoldiana* (twelve feet); Carmine Crab, *M. atrosanguinea* (twenty feet); Japanese Crab, *M. floribunda* (twenty feet); Hall's Parkman Crab, *M. halliana parkmanni* (fifteen feet); Hopa Crab, *M. Hopa* (fifteen feet); Tea Crab, *M. theifera* (twenty feet); Bechtel's Crab, *M. ioensis plena* (fifteen feet); and Sargent's Crab, *M. sargentii* (eight feet).

The writer's personal preference among the above is the Arnold Crab, of which there is a specimen at 1 Fairview Avenue, A



AMERICAN ELM

In field and pasture, one of the most beautiful trees. Over the roof and in the garden, a 'perennial headache'.

Japanese Crabapple may be seen at 158 David Street. An extensive planting of assorted Crabapples is being made in Silver Lake Park which, when mature, should be much admired.

The Oriental Flowering Cherries are no less beautiful when in bloom, but lack the ornamental fruits. The following are popular: Fuji Cherry, *Prunus incisa* (eighteen feet); Autumn Higan Cherry, *P. subhirtella autumnalis* (thirty feet); Fugenzo or Veitch Cherry, *P. serrulata*, var *Fugenzo* (twenty feet); Yoshino Cherry, *P. yedoensis* (thirty-five feet). This last is the one of Washington, D. C., fame. The Kwanzan Cherry, *P. serrulata sekiyama* (forty feet), is the most abundant one in the Brooklyn Botanic Garden planting. The Columnar Cherry, *P. amanogawa* (twenty feet), is very spectacular. It is narrowly upright. The Weeping Higan Cherry, *P. subhirtella pendula* (fifteen feet), forms a beautiful lawn specimen. One may be seen at 347 E. 12th St.

Closely related to the Flowering Cherry is the Purple-leafed Cherry.

Prunus pissardi (fifteen feet). This is grown largely for its purplish-red foliage, though it does have pink flowers in spring. Specimen: 270 Pelton Ave.

Landscape architects make much use of our native Flowering Dogwood, *Cornus florida*, and its variety *rubra* (twenty feet). These seem to have about all the fine qualities one could desire: large, showy blossoms of white or pink, in May; red fruit in early fall; brilliant scarlet foliage in late fall; pleasing form in winter. *Caution*: trees collected in woodlands rarely succeed. Plant in spring nursery-grown trees only. Specimen: 40 Henderson Avenue.

The Japanese Dogwood, *Cornus kousa* (twenty feet), is an interesting variation with white blooms in June instead of in May. Chinese Dogwood, *Cornus kousa chinensis* (twenty feet), is occasionally attractive, due to its larger blooms. No specimens locally, but they grow well in this city.

Cornelian Cherry, *Cornus mas* (twenty feet), is a true tree-wood but has small yellow bloom clusters in early spring, similar to those of Spicebush; also glossy leaves. Specimens along 1st Road driveway, entrance to Clove Lakes Park.

For both specimen use and for screen plantings, the Hawthorns are very valuable. They can even be used as tall hedges (some grow to twenty feet). The numerous, small, apple-blossom-like flowers appear in May—white, pink or red. Growth is dense and sometimes thorny. The small red fruits in fall are ornamental and are liked by birds. Paul's Scarlet English Hawthorn, *Crataegus oxyacantha pauli plena* (fifteen feet), is one of the best. Specimen in Von Briesen Park near Dix Street. The Washington Hawthorn, *Crataegus phaeocarpa* (twenty feet), is also excellent. Other specimen Hawthorns are at 78 Clinton Avenue and 4 Westcott Boulevard. Numerous varieties are available.

Most of the hardy Magnolias are popular on small home grounds. The notable exception is the Cucumber Magnolia, which grows to gigantic proportions. Most popular of all is the Star Magnolia, *M. soulangeana*, and especially its variety *lennei* (twenty feet). Specimen: 194 Rose Avenue. It usually has several trunks. The flowers are large; white inside and pink outside. The Yulan Magnolia, *M. denudata (conspicua)* (forty feet), is a single-trunked tree, laden in April with pure conspicuous white flowers. Specimen: 1377 Richmond Road. The Star Magnolia, *M. soulangeana* (eight feet), is a gem for sheltered locations. Specimen: 440 Hylan Boulevard.

The Goldenrain tree, *Koelreuteria paniculata* (twenty feet), is a showy lawn tree having large, bright yellow panicles of flowers in July. Foliage is attractive too. Specimen: 1607 Richmond Road. There are also several on the lawn of the Staten Island Hospital.

Rare a few years ago, but recently widely planted, is the Mimosa Tree (Mimosa), *Albizia julibrissin rosea* (thirty feet). It has fragrant pink tufts of bloom through July and August. It grows very rapidly from seed. One tree to a city lot is enough.



FLOWERING DOGWOOD

Beautiful throughout the year. Not too big.



FLOWERING CRABAPPLE

Attractive in flower, foliage and fruit.
Varieties vary from dwarf to moderate size.

they are wide-spreading. Foliage is light and feathery. Specimen 122 Collfield Avenue. There are also many along Howard Avenue.

Silverbell, *Halesia carolina* (*tetraptera*) (fifteen feet), is a round-headed small tree that bears rows of white, dangling, bell-shaped blooms in May, followed by lantern-like pods. Specimen 5 Little Clove Road.

A favorite late-blooming tree of narrow, upright habit is Snowwood, *Oxydendrum arboreum* (forty feet). The drooping white tassels of bloom appear in August. This tree harmonizes well with Rhododendrons, Azaleas and Laurels. Foliage is red in autumn. Specimen: at northerly corner of Clove Lakes Park administrative building.

The Red Horsechestnut, *Aesculus carnea* (thirty-five feet), is much preferred to the common Horsechestnut. The leaves remain rich green all season. There are practically no fruits to litter the lawn. The blooms are more beautiful, and it is also more dwarfed. Specimen: 468 Bard Avenue.

European Mountain Ash or Rowan Tree, *Sorbus aucuparia* (forty feet), is an excellent narrowly upright tree with white, drooping bloom clusters in spring and brilliant red fruits in fall. Specimen 67 Knox Place. The American species does not thrive here. *Caution*: watch for borers.

Smoketree, *Cotinus coggyria* (fifteen feet), is a curious, small round-headed tree or large shrub, with plumose fruiting panicles that create a smoky appearance. Foliage is gold in fall. Specimen 153 Henderson Avenue.

Yellowwood, *Cladrastis lutea* (forty feet), is a moderate-sized tree here; larger southward. It has fragrant white panicles of pea-like blooms in July. A solitary specimen (poor) exists as a street-tree at 1289 Bay Street.

The Epaulette-tree, *Pterostyrax hispida* (twenty feet), is a shapely, upright tree, with white, pendulous, fragrant blossoms in June, followed by ornamental fruit clusters that remind one of a naval epaulette. Specimen: 144 Todt Hill Road, at side of house.

The Japanese Tree Lilac, *Syringa amurensis japonica* (twenty feet), is a real, single-trunked tree with abundant large panicles of white blooms in June. Specimens: 377 Sleight Avenue.

The Devil's Walkingstick, *Aralia spinosa*, has the unique habit of growing rapidly and then stopping at a moderate height (twenty-five feet), where it forms a round head or crown. Some people consider its Sumach-like foliage unattractive, or object to the tendency to send up sprouts from roots; but in August, when blossoms are scarce in the landscape, huge panicles of small white blooms appear that attract much admiration. These are followed by black berries in September. Specimen: 163 Clinton Avenue.

So much for flowering trees. There are many more, but most of them are less readily obtainable. Some will ask: "Why not grow trees such as apples, plums and sweet cherries, so as to enjoy both blossoms and delicious fruit?" One should count the cost before attempting to do this on Staten Island,—ten people have



WEeping WILLOW

Beautiful when small, but a rapid grower.
At maturity oversized and a great nuisance.

have done it with satisfaction. It would take a long search to find them! If determined to try it, he had better begin with dwarf fruits. Spraying to keep ahead of insects and diseases would be greatly simplified then. For anybody but an expert, spraying standard-sized fruit-trees is a headache, and don't let the organiculturists convince you that spraying will not be needed.

Growing fig trees, *Ficus carica* (fifteen feet), on the south shore, has delighted many a good citizen, especially those who remember sunny Italy. No pests bother these, but winter protection is needed. Varieties differ much in hardiness, Celeste being one of the hardiest. Specimen: 820 Richmond Road.

With so many flowering trees available, one may wonder why other trees are considered at all. The answer is that the blooms last but a short time. Attractive foliage, interesting bark, and shapely habit, are fully as important as the flowers. There are trees, such as the Catalpa and the Paulownia, that in spite of having gorgeous blooms, are out of place near the home because of other coarse qualities.

Mention of the Catalpa and Paulownia brings to mind the subject of umbrella trees. These two varieties are often kept pruned to a height of 10 to 14 feet so that they grow in the form of an umbrella. Such pruning prevents blooming but keeps the tree small. In the case of the Weeping Mulberry a similar effect is created by the nurseryman by budding the weeping type of tree on a

top of an erect trunk. The Mulberry has not the coarseness the other two, but its small size and weeping or drooping habit make it of little value for shade. It is less popular than former.

At the east front of the St. George Public Library is an umbrella tree of a unique and beautiful sort. It is a Sour Gum tree, *Nyssa sylvatica*, with the leader pruned out at a height of ten feet. The horizontal branches form a perfect sunshade that could be used to advantage in a small back yard. The foliage is glossy dark green which turns to scarlet in autumn. The tree bears small blue-black fruits enjoyed by the birds.

Another native tree, the Carolina Hornbeam, *Carpinus caroliniana* (thirty feet) gives this same get-out-and-sit-under invitation. Its smooth, blue-gray bark and contorted horn-like branches are interesting throughout the year. It needs no heading back. Specimen: 3599 Richmond Road, at curb.

The Sakhalin Corktree, *Phellodendron sachalinense* (forty feet), is a good small shade tree with leaves somewhat like the Ash. The bark is fissured to remind one of cork. The male tree is preferred as it lacks fruits that are objectionable. Specimen: in front of building in De Matti Playground, Tompkins Avenue, near Chestnut Avenue.

The English Hedge Maple, *Acer campestre* (thirty-five feet) is the best of the moderate-sized Maples for shade on the small place. Its small, thick leaves resist insects and diseases. It may be trained to a single trunk or allowed to grow shrubby. Specimen: at curb beside 34 Fort Place.

The Japanese Maple, *Acer palmatum* (fifteen feet) is just as popular as a lawn specimen. Its contorted form is interesting, and its leaves, of all shades from pure green to bright red, are showy. These may be star-shaped, or variously dissected. The green forms seem to be more vigorous and winter-hardy than the red. All forms are very slow growing. Specimen: 3089 Richmond Road.

The Amur Maple, *Acer ginnala* (twelve feet) is similar to the above. Its leaves are green and have but three lobes. Their autumn color is red. Conspicuous seed clusters detract from the appearance. Specimen: 173 Rice Avenue, at side.

The Gray Birch, *Betulus populifolia* (thirty feet) hardly needs introduction, it is so common. It gives a light shade which allows flowers to grow near it. The graceful, clustered white trunks are very effective against an evergreen background. Specimen: 47 Kissell Avenue.

The subject of evergreen trees is one worthy of a better review than can be accomplished in an article of this length. The most common mistake is the planting of forest-type trees in the foundation planting, forcing one to start all over again in a few years, or else to live behind an unsightly, unwelcome screen. The best standing city conditions best are the Scotch and the Austrian Pines. Both reach an ultimate size which limits their use to spots away from the house. Remember that they cast shade in winter

when sunlight is needed in windows. Both Carolina and Canada Hemlocks, though they grow large, stand shearing so well that they are useful in borders for screening purposes, even on the small place. The same can be said of Arborvitae. The Yews have foliage similar to the Hemlocks, but their more dwarf nature and slow growth permit their use in foundation planting and as low hedges.

Generally speaking, the broad-leaved evergreens, such as Rhododendrons, Azaleas, Andromedas, Mountain Laurels and related plants, find greater usefulness on the small plot than the conifers. Their deciduous relatives, such as the Blueberries and Redvein, should also be considered.

Books on landscaping make much use of the word "vista", meaning view. They say that in placing the house on the plot and in arranging the trees, shrubs and outdoor structures, one must keep open pleasing vistas from the terrace and from much-used windows. They refer also to service yards and secluded retreats. That is all very well for estates where dwellings are 200 feet or more apart; but our problem is far different. Our neighbors' houses on each side are 20 feet or less away, and at the rear perhaps 100 feet. Vistas are still important, but they extend into the lands of the neighbors. In such urban surroundings, (as everywhere, indeed,) "no man lives unto himself alone." In landscaping the 40 by 100-foot lot one must consider the feelings of the neighbors. Planting a Norway Maple on the south border of a neighbor's garden will make him a lifelong enemy, when he learns of its excessive shade and of the surface feeding habits of its roots. Surround the lot with a tall privet hedge or by a dense shrub border and the neighbors will be writing to "Mr. Fixit" to see what can be done about it. The neighbor wants to grow Roses, Peonies, Iris, or vegetables. These all demand much sunlight and freedom from root competition. "Mr. Fixit" will say, in effect, "Love thy neighbor as thyself; see him."

In the urban community every view is jointly owned. The neighbor's tree is almost as important to you as to him; likewise his lawn and flowers. If in your own planting you consider well his happiness, you will most likely remain good friends; maybe even friendly competitors in civic improvement. His praise will increase your joy.

In Westerleigh, where house lots are exceptionally small, homeowners frequently eliminate entirely any marking of property lines. Lawns are continuous, and other plantings so arranged that several yards seem like one continuous planting, varied, of course, to suit the tastes of individual owners. The effect is very pleasing. A specific example worthy of any man's critical study, is the upper section of Crystal Avenue, north of Watchogue Road. The Decker Avenue Civic Association is doing good work in fostering the idea of eliminating useless, space-consuming, and creating, boundary hedges.

Where trespassing is a problem, fences of open type are more satisfactory than hedges. Vines, such as Clematis or Morning Glory can make them beautiful. Flower borders (yours and your neighbor's) can extend right up to the fence. Some shrubs will be needed, but continuous shrub borders and hedges interfere with perennial and annual flowers, and consume much valuable space.

For screening of unsightly objects shrubs will be needed, even low-branched trees such as Hawthorns or Hemlocks. In either case select varieties easily kept within bounds.

Those who still feel that the shade of tree branches overhanging the roof is desirable, should consider its variable and inconsistent nature, and the effects of breezes. Much more efficient is insulation under the attic floor and in the siding, plus proper ventilation by louvers and ducts. These methods also save fuel. Overhanging branches eliminate window gardens. Let your gardening extend indoors.

It is unlikely that many of the recommended tree varieties can be obtained in any local nursery. The best plan is to write for catalogs of the larger nurseries advertised in the gardening magazines or in the garden pages of the Sunday newspapers. Sources of rare trees can be learned from the Arnold Arboretum, Jamaica Plain, Massachusetts.

Above all, it is important to remember that a new tree is a lifetime investment. The purchaser who relies upon the advice of a poorly informed amateur, or a landscape contractor or a small nursery-man of dubious reputation, is likely to suffer great loss. One should have a clear mental picture of the mature tree or shrub before buying, and this is often no easy matter. The nurseryman can rarely show mature specimens; and an odyssey to all of the places mentioned above would consume much time. In addition, most Staten Islanders find a journey to either the Bronx or the Brooklyn Botanic Garden very tedious, though the plantings in them are excellent.

What, then, is the solution?

First, as these remarks have implied, the prospective tree planter, because he is making a real investment (both in money and in future happiness), must take the time necessary to learn all he can about the conditions of his neighborhood, his own lot of ground, and the various species suitable to those conditions; and second, he must decide, on the basis of a mature tree, just exactly which species is most pleasing to him aesthetically as well as practically. The first problem is relatively easy to solve, if one is willing to put in a little time at observation and at the examination of the proper books, guides and catalogues,—most of which can be found quite easily in libraries. The second problem is the baffling one, for if the householder cannot, or will not, take the time to travel in search of the tree he wants to examine, he may be hard put to make a wise decision.

Would not the best solution be a large and easily accessible region on Staten Island where extensive tree and shrub plantings and

be maintained for public examination and education?¹ Such trees and shrubs should be attractively grouped and fully labeled. People don't like to ask questions and often they feel they know too little to ask intelligent ones. Proper labeling is the only answer to this problem. Almost as important would be the ideas gained from the proper planting of trees and shrubs together. This should be done in sufficient variety of arrangement and choice of species so that the householder could make an intelligent and suitable choice for his own particular plot.

The saving to the individual, in avoiding expensive mistakes, would be great; but the benefits in terms of happier living, because of more beautiful home surroundings, would be incalculable. The character of our children is molded by their environment. The happiness of older folks is largely dependent upon it.

¹We do not know what part Mr. Rundlett or the Park Department has played, but it has come to our attention that the city hopes to set aside a large area in Latourette Park as an arboretum and botanical garden, a project which many of our readers will undoubtedly wish to support.—Editor.

A STUDY OF THE GRASS FLORA OF STATEN ISLAND

ROBERT C. MEYER

It would indeed be interesting if we could go back for a time and see the flora of Staten Island as it existed over sixty years ago, during the days when Nathaniel L. Britton was making his collection. Many of the beautiful wild flowers of those days are gone forever or are rapidly being made extinct by brush fires and the advance of building construction.

Of all groups of plants, the grasses have perhaps suffered the least from "civilization," not only on Staten Island, but in other areas as well. Since they will grow in a wide range of soils and environmental conditions, and bear seed in abundance, grasses will appear almost anywhere, even in the most unusual places. They are among the first plants to take over abandoned highways and building sites, sprouting up through the cracks in concrete walks and asphalt pavements, wherever a tiny bit of soil has lodged to give them a foothold. They will grow in the almost sterile cinder beds and ballast of railroad embankments, where most other plants would not survive.

One of the main reasons why they are so well able to survive is the ease with which they can be transported. The seeds of grasses are light and small, and are easily blown about by the wind, carried in trouser-cuffs, lodged on the wet running boards of trucks and autos, or tucked away in the far corners of roving freight cars. Since travel in this country has increased manyfold since last century, it may be readily seen that those plants whose seeds are easily transported will in time obtain a wider distribution. An illustration of this point was the discovery by the writer of a grass of the Western plains, *Aegilops cylindrica* Host., (Jointed goat grass), growing in profusion along the Staten Island Rapid Transit Railway near Rosebank station in July, 1949. A re-inspection of the spot this year revealed no specimens, the grass having evidently succumbed to the competition of our local species. Even though they may grow for but a brief period, one never knows when an entirely "new" or "foreign" grass may sprout up along the wayside.

In a comparison of grasses entered in the local herbarium by Britton during the years 1878-1910 with those found today, this writer has failed to find 46 out of 153 species collected in those years. Only three species were found by the author to be "new" to Staten Island—the grass mentioned above, and another plain

grass, *Eragrostis trichoides* (Nutt), grown artificially in the writer's yard in Port Richmond, and the bristly foxtail grass (*Seteria verticillata* L. Scribn.) The last mentioned species will usually be found growing in the cracks of sidewalks in front of dilapidated buildings in the older, less improved sections of the Island.

Several species of grasses found in only limited areas during the last century have since spread rapidly to all parts of the Island. The most important of these are the giant reed (*Phragmites communis*), Virginia Beardgrass (*Andropogon virginicus* L.), and little blue stem (*Andropogon scoparium*), which have taken over large areas of the Island. The *Phragmites* has replaced our native cat-tail in many local swamps, in both fresh and brackish water, while the last two species mentioned have taken over large areas of poor upland soil such as we find on the hills of Clove Lake Park, Fox Hills, and the meadow area between Mill Road and Hylan Boulevard in New Dorp.

An interesting change has recently taken place in the last area mentioned. The meadows at the rear of the Tavern-on-the-Green have been denuded of topsoil by bulldozing operations, and the result has been the almost complete establishment of smooth panic grass (*P. dichotomiflorum*) on land thus treated. Much of the topsoil has been pushed up into large mounds of earth which have remained undisturbed since the original scraping operation took place. The mounds have also become densely overgrown with smooth panic grass. Whether the beard grasses will re-establish themselves if further housing developments fail to materialize, remains to be seen.

Another grass worthy of mention at this point is the tall switch grass (*Panicum virgatum* L.), which has also been very successful in establishing itself in areas of poor soil. Practically the only vegetation growing in some fields in the sandy areas of Rossville and Travis consists of specimens of this plant which vary considerably in height according to the presence of nutriment in the soil. This plant has had an even wider distribution throughout the Island than any of those mentioned above. It not only has adapted itself to the sterile barren areas, but also grows luxuriantly in open, fertile uplands. Switch grass is a hardy perennial and will withstand repeated burning over by brush fires, as will also our "indestructible" *Phragmites*.

A grass which has seemingly disappeared from our Island for a time and then reappeared is the forked beard grass (*Andropogon furcatus*). It had previously been found in the New Dorp area by Britton and Hollick, but no longer grows in that locality. A well established and thriving growth of this grass has been found by the author along the Arthur Kill Road just north of Outerbridge Crossing.

The triple-awned grass (*Aristida tuberculosa*), has had a similar history. It formerly grew in Tottenville, but now can be found only in the sandy soil of Great Kills Marine Park.

Several species of grasses, in addition to the ubiquitous *Phragmites*, have shown a strong tendency to spread and maintain their growth in areas formerly occupied by other plants. The Japanese Plume Grass (*Miscanthus sinensis*), has been introduced as an ornamental grass on former estates, especially in the Clove Lake Park area. It has spread rapidly in this area, and being a hardy perennial, its huge tufts have withstood the ravages of local brush fires. The Indian grass (*Sorghastrum nutans*), and the Johnson grass (*Sorghum halepense*), have also increased their growth considerably on Staten Island. The former is a tall, slender grass which, unlike other "aggressive" species, does not grow in dense tufts or clumps, but grows individually in tall, nodding panicles making it one of the most beautiful of all our native grasses. Johnson grass is a species prevalent throughout our Southern states, and in addition to being used as a forage grass, has also become a troublesome weed in parts of that region. There are several scattered "stands" of this grass on our Island, some of which have been known to the author for several years. Although it does not spread in our locality with the aggressiveness that is characteristic of the beforementioned species, it nevertheless maintains itself in vigorous growing condition. This grass, like other of our introduced species, will be found springing up along roadsides, in vacant lots, or on the edge of dumps or filled-in ground. It is often found in close proximity to chicken coops, the seed having been transferred in poultry feed and subsequently sprouting in the adjacent areas. If we continue to have mild winters, accompanied by lengthy, warm summers, such as we have had during the past year, we may expect Johnson grass, and perhaps other Southern species, to become firmly established on the Island. Winter-killing would of course result in the event of a bitter, cold winter season such as we had in the years 1911 and 1934.

As for rarities, there are very few to be found among the grasses on Staten Island, but it must be mentioned again that the like place to find something "new" or "rare" is along the avenues of transportation, namely, the railroads and roadways. Several species of grasses which formerly grew on the Island could, in doubt, be re-introduced artificially, since the environment necessary for the survival of some of them has not changed. An attempt will be made by the writer to re-introduce some species which are listed in the textbooks as indigenous to this locality. It will at least be interesting to note the results of such an experiment. Such a stunt, however, will not produce the genuine excitement of finding a plant entirely new to the area, growing in full bloom.

along some path or roadside which you have passed a thousand times before. This will, as always, remain the greatest thrill for any botanist.

The following is a list of grasses which have been found growing on Staten Island since the year 1944, the nomenclature of which follows Britton and Brown, second ed., 1913. Most of them are represented by mounted specimens in the Institute's herbarium:

1. *Tripsacum dactyloides* L.
2. *Miscanthus sinensis* Anderss.
3. *Andropogon scoparius* Michx.
4. " *glomeratus* (Walt.) B.S.P.
5. " *virginicus* L.
6. " *furcatus* Muhl.
7. *Sorghastrum nutans* (L.) Nash.
8. *Sorghum halepense* (L.) Pers.
9. *Syntherisma filiforme* (L.) Nash.
10. " *Ischaemum* (Schreb.) Nash.
11. " *Sanguinale* (L.) DuLac
12. *Paspalum Muhlenbergii* Nash
13. " *circulare* Nash.
14. *Echinochloa Crus-galli* (L.) Beauv.
15. " *Walteri* (Pursh) Nash.
16. *Panicum dichotomiflorum* Michx.
17. " *capillare* L.
18. " *Philadelphicum* (Bernh.)
19. " *amarulum* Hitch. & Chase.
20. " *amarum* Ell.
21. " *virgatum* L.
22. " *agrostoides* Spreng.
23. " *depauperatum* Muhl.
24. " *sphaerocarpon* Ell.
25. " *dichotomum* L.
26. " *microcarpon* Muhl.
27. " *Lindheimeri* Nash.
28. " *Lucasae* Ashe.
29. " *implicatum* Scribn.
30. " *tennesseense* Ashe.
31. " *Commonsianum* Ashe.
32. " *Scribnerianum* Nash.
33. " *scoparium* Lam.
34. " *commutatum* Schultes.
35. " *Boscii* Poir.
36. " *clandestinum* L.
37. *Chaetochloa verticillata* (L.) Scribn.
38. " *glauca* (L.) Scribn.
39. " *viridis* (L.) Scribn.
40. " *italica* (L.) Scribn.

41. *Cenchrus tribuloides* L.
42. " *carolinianus* Walt.
43. *Lersia virginica* Willd.
44. " *oryzoides* (L.) Swartz.
45. *Phalaris arundinacea* L.
46. " *canariensis* L.
47. *Anthoxanthum odoratum* L.
48. *Savastana odorata* (L.) Scribn.
49. *Aristida dichotoma* Michx.
50. " *tuberculosa* Nutt.
51. *Muhlenbergia Schreberii* Gmel
52. " *mexicana* (L.) Trin.
53. *Phleum pratense* L.
54. *Alopecurus aristulatus* Michx.
55. " *pratensis* L.
56. *Sporobolus vaginaeflorus* Torr.
57. " *asper* (Michx) Kunth.
58. *Cinna arundinacea* L.
59. *Agrostis alba* L.
60. " *maritima* Lam.
61. " *Schweinitzii* Trin.
62. " *perennans* (Walt.) Tuckerm.
63. " *hyemalis* (Walt.) B.S.P.
64. *Calamagrostis canadensis* (Michx) Beauv.
65. *Ammophila arenaria* (L.) Link.
66. *Holcus lanatus* L.
67. *Deschampsia flexuosa* (L.) Trin.
68. *Avena sativa* L.
69. *Arrhenatherum elatius* (L.) Beauv.
70. *Danthonia spicata* (L.) Beauv.
71. *Capriola dactylon* (L.) Kuntze.
72. *Spartina Michauxiana* Hitch.
73. " *Cynosuroides* (L.) Roth.
74. " *patens* (Ait.) Muhl.
75. " *stricta* (Ait.) Roth.
76. *Elusine indica* (L.) Gaertn.
77. *Phragmites communis* Trin.
78. *Tridens flava* (L.) Hitch.
79. *Triplasis purpurea* (Walt.) Chapm.
80. *Eragostis capillaria* (L.) Need.
81. " *Frankii* Strud.
82. " *pilosa* (L.) Beauv.
83. " *major* Host.
84. " *pectinacea* (Mich) Steud.
85. *Sphenopholis pallens* (Spreng) Scribn.
86. *Distichlis spicata* (L.) Green
87. *Dactylis glomerata* L.

88. *Poa annua* L.
89. *Poa trivialis* L.
90. *Poa pratensis* L.
91. *Poa compressa* L.
92. *Poa nemoralis* L.
93. *Poa debilis* Torr.
94. *Panicularia canadensis* (Michx.) Kuntze.
95. " *obtusa* (Muhl.) Kuntze.
96. " *nervata* (Willd.) Kuntze.
97. " *pallida* (Torr.) Kuntze.
98. *Festuca ovina* L.
99. " *capillata* Lam.
100. " *elatior* L.
101. *Bromus tectorum* L.
102. " *sterilis* L.
103. " *ciliatus* L.
104. " *secalinus* L.
105. " *racemosus* L.
106. " *japonicus* Thunb.
107. *Lolium perenne* L.
108. " *multiflorum* La.
109. *Agropyron repens* (L.) Beauv.
110. *Hordeum jubatum* L.
111. *Elymus virginicus* L.
112. " *canadensis* L.
113. *Aegilops cylindrica* Host.

STATEN ISLAND BIRD COUNT

MATHILDE WEINGARTNER

Twice each year the members of the Institute's Section of Natural History and their friends arouse the mild astonishment of Staten Island by sallying forth in groups, armed with binoculars, scientific manuals, and insatiable curiosity, to spy upon the birds. In the spring it is the object of these enthusiasts to estimate the number and kinds of birds who have taken mates, set up housekeeping, and entered upon the serious business of raising families. In the winter the object is to see how many and which kinds have flown in from the North or have lingered in preference to flying South.

This is, of course, a kind of ornithological Gallup poll, since nobody could ever count exactly anything so numerous, or so fidgety, as birds. The idea is to have several groups of people poking around, on the same days and under the same weather conditions in as many different kinds of territory as possible, to take note of the members of each species of birds actually identified. These totals are noted and from year to year give an indication of trends in birds' habits and population. The numbers of any one year alone are comparatively valueless; it is the data taken over a series of years that give the serious student something from which he can draw reasonably correct conclusions.

Of course, these trips would probably take place even were there of no value to science; the bird-lover enjoys the opportunity of getting into the open and of testing his knowledge and his powers of observation. It is, in short, a pleasant and rewarding hobby that anybody can indulge in, for an hour or two in his own back yard, or on an all-day census trip. But it does not end there. The data collected have great value to those engaged in scientific study of birds or in their preservation.

The census trips were organized in 1900 by the National Audubon Society and have been going on ever since. The Fish and Wildlife Service of the United States Department of the Interior aids and encourages the work in every way it can. Both organizations are interested in the conservation of bird-life and use the bird census records as a basis for advice in the formulation of hunting regulations, in the control of the sale and use of wild bird feathers and in the management and protection of feeding and breeding grounds. Census trips on Staten Island were initiated in 1908, and each year since then our records have been turned over to the National Audubon Society to become a part of the vast and valuable data assembled from all over the continent.

The tenth annual breeding bird count on Staten Island (the National Audubon Society itself started this type of cen-

as late as 1936)—was taken by five observers, Howard H. Cleaves, Lee A. Ellison, Henry Flamm, Jr., Casimir Redjives, and Mathilde P. Weingartner, in a series of trips from April to early June in order to include both the early and the late nesting species. Back yards, gardens, woodlands, fresh and salt water marshes, and brushy fields, in all parts of the Island were covered. Seventy-eight species in all were counted, the complete list of which, along with that of the winter count, follows these comments.

Among the rare finds was the nest of a wood duck discovered by a Park Department employee in Latourette Park. The wood duck is known to have existed in numbers on Staten Island in the early days, but became almost extinct, as in the East generally, during the first half of this century. However, within the last five years they seem to be making a comeback. This nest, with eight eggs, was in a tree, and the female remained on the nest in full view of many golfers.

Another unusual discovery was that of a pair of purple martins nesting in a martin house near Lemon Creek. This is the first time martins have nested on Staten Island in many years. Several eggs were laid and the young hatched; but they died later, of an unknown cause.

On Sunday, December 30, twelve observers, Howard H. Cleaves, Roger Christiansen, Lee A. Ellison, Fred. Hopping, William H. Lea, Carlita Nesslinger, Charles Pearson, Casimir Redjives, Miriam C. Stryker, James L. Whitehead, George Wilmott and Mathilde P. Weingartner, conducted the 43rd annual Christmas Bird Count. Traveling in five parties, they covered 58 miles on foot and 130 miles by car, birding all the way. Heavy skies finally delivered rain and fog, making the business at hand more difficult, but discouraging nobody. Although the weather was warm, an earlier cold spell had left all ponds covered with ice. Despite the unfavorable conditions, a total of 56 species was recorded, the highest number ever recorded on Staten Island for a winter census. Several items of special interest should be noted. A number of migrants and summer residents seem to have been left behind, among them towhees, catbirds, Savannah sparrows, a clapper rail and a Carolina wren; the total of 237 buttoned ducks far exceeds the largest number ever recorded before—98 in 1942; the eight purple sandpipers found at Oakwood Beach by Mr. Cleaves seemed to be the special rarity of the day; and downys, chickadees, blue jays, flickers and white-breasted nuthatches were present in unusually large numbers.

1951 Breeding Bird Count

GREEN HERON—seen by all observers—various localities.

BLACK-CROWNED NIGHT HERON—several in scattered localities.

LEAST BITTERN—Cleaves and Redjives; Clay Pit Ponds.

BLACK DUCK—Cleaves; Bay Terrace and Marine Park; nest with seven eggs.

MAILLARD—Weingartner; Wolfe's Pond Park, May 25.

BLUE-WINGED TEAL; Great Kills Park, May 17.
 WOOD DUCK—Cleaves and Weingartner; Latourette Park.
 TURKEY VULTURE—Cleaves; Prince's Bay, May 30; no nest found.
 COOPER'S HAWK—Ellison and Weingartner; Lambert's Lane.
 OSPREY; frequent fisher in our waters; no nests seen.
 SPARROW HAWK—Cleaves; Pleasant Plains.
 PHEASANT—Weingartner; Wolfe's Pond Park and Mt. Loretto.
 CLAPPER RAIL—Cleaves; Lemon Creek, June 2.
 PIPING PLOVER—Redjives; two pair with young at Marine Park.
 KILLDEER; numerous parts of the island.
 SPOTTED SANDPIPER—Flamm; Marine Park; nest with four eggs.
 WOODCOCK—Redjives, Weingartner, Ellison; several pairs in the vicinity of Lambert's Lane.
 COMMON TERN; seen frequently at Marine Park but doubtful nester.
 LEAST TERN—Redjives, Cleaves, Weingartner; Marine Park.
 ROCK DOVE; common nester.
 MORNING DOVE; common nester in many parts of the island.
 SCREECH OWL—Cleaves; two well-grown young were photographed in nesting box in Tottenville.
 WHIP-POOR-WILL—Cleaves and Redjives; southern portion of the island.
 CHIMNEY SWIFT; common; nesting habits uncertain.
 KINGFISHER—Cleaves; Mt. Loretto.
 FLICKER)
 DOWNY WOODPECKER) common breeders.
 KINGBIRD)
 CRESTED FLYCATCHER)
 ALDER FLYCATCHER—Ellison and Weingartner; Travis marsh; late migrant probably did not nest here.
 WOOD PEWEE—Ellison, Flamm, Weingartner; Todt Hill, Lambert's Lane and Richmond Hill Woods.
 PRAIRIE HORNED LARK—Cleaves, Redjives, Weingartner; Flamm; Marine Park; young bird seen out of nest.
 TREE SWALLOW—Redjives and Weingartner; Marine Park and Brady's Pond, June 8.
 BARN SWALLOW; common breeder.
 ROUGH-WINGED SWALLOW—Cleaves; Lemon Creek and Brady's Pond.
 PURPLE MARTIN—Cleaves; Lemon Creek.
 BLUE JAY; common breeder.
 CROW; not numerous on the island any longer. Doubtful breeder.
 FISH CROW—Cleaves; Pleasant Plains; doubtful nester.
 CHICKADEE—Ellison and Weingartner; Moravian Cemetery.
 HOUSE WREN; common breeder.
 LONG-BILLED MARSH WREN—Ellison; marsh near Richmond.
 WHITE-BREASTED NUTHATCH—Ellison; Moravian Cemetery.
 CATBIRD)
 BROWN THRASHER) common breeders.
 ROBIN)
 WOODTHRUSH)
 VEERY—Ellison; Lambert's Lane.
 BLUEBIRD—Weingartner; Latourette Park.
 CEDAR WAXWING; infrequent nester.
 STARLING; plentiful.
 WHITE-EYED VIREO—Ellison; Travis Avenue and Lambert's Lane.
 RED-EYED VIREO; common nester in all woodlands.
 YELLOW WARBLER—Weingartner; Clove Lakes Park, June 7.
 PRAIRIE WARBLER—Flamm; three on Todt Hill and three on South Avenue, June 7.
 OVENBIRD—Ellison; Boy Scout Short Term Camp, June 3.
 YELLOWTHROAT; common breeder.
 REDSTART—Flamm; Travis, Richmond Woods, Todt Hill, Clove Lakes Park.

ENGLISH SPARROW; plentiful.

BOBOLINK—Weingartner and Ellison; Travis meadows, June 7.

MEADOWLARK—Ellison and Weingartner; New Dorp, Latourette Park, Mt. St. Michael, June 7.

REDWING; common nester in all swamps.

ORCHARD ORIOLE—Cleaves; Prince's Bay.

BALTIMORE ORIOLE—Cleaves and Weingartner; Pleasant Plains, Livingston, Wolfe's Pond Park.

COWBIRD; although these birds do not build their own nests, they were commonly seen near nesting boxes of other birds, waiting for a chance to lay their eggs in one of them.

CARDINAL; common breeder.

SCARLET Tanager—Weingartner and Ellison; Egbertville.

ROSE-BREASTED GROSBEAK—Cleaves; Pleasant Plains, June 8. This bird may breed here.

GOLDFINCH; common nester.

INDIGO BUNTING; common nester in many parts of the Island.

TOWHEE; common breeder.

GRASSHOPPER SPARROW—Flamm; New Dorp.

SEASIDE SPARROW—Redjives, Cleaves, Weingartner; Marine Park.

SHARP-TAILED SPARROW—Cleaves; Marine Park, Travis Marsh.

CHIPPING SPARROW—Ellison and Weingartner; Moravian Cemetery.

FIELD SPARROW; brushy areas in various localities.

SWAMP SPARROW—Ellison and Weingartner; Travis and South Avenues.

SONG SPARROW; common breeder.

1951 Christmas Bird Count

Red-throated Loon	2	Horned Lark	37
Horned Grebe	18	Blue Jay	80
Black Duck	534	Crow	321
Scaup Duck (est.)	1200	Chickadee	74
Goldeneye Duck	42	White-breasted Nuthatch	24
Bufflehead	237	Red-breasted Nuthatch	3
Old Squaw	27	Brown Creeper	1
White-winged Scoter	37	Carolina Wren	1
Hooded Merganser	1	Catbird	2
Red-breasted Merganser	10	Robin	6
Cooper's Hawk	1	Bluebird	1
Red-tailed Hawk	3	Starling	700
Sparrow Hawk	8	Myrtle Warbler	24
Marsh Hawk	4	English Sparrow	83
Ring-necked Pheasant	14	Meadowlark	4
Clapper Rail	1	Red-winged Blackbird	4
Killdeer	15	Cowbird	6
Purple Sandpiper	8	Cardinal	37
Great Black-backed Gull	45	Goldfinch	19
Ring-billed Gull	5000	Towhee	3
Bonaparte's Gull	14	Savannah Sparrow	4
Mourning Dove	250	Slate-colored Junco	107
Long-eared Owl	12	Tree Sparrow	27
Kingfisher	1	Field Sparrow	7
Flicker	1	White-throated Sparrow	4
Hairy Woodpecker	16	Swamp Sparrow	78
Downy Woodpecker	1	Song Sparrow	15
	23	Snow Bunting	



George William Curtis

(Above left) By Burrill Curtis.
(Below left) By Samuel Lawrence. 1854.

(Above right) Artist unknown.
(Below right) By A. Perkins. 1854.

“IN HIS HABIT AS HE LIVED”

The George William Curtis Portraits

MABEL ABBOTT

Seventy-five years ago, few names in the United States were more familiar to readers than that of George William Curtis. He had been writing successful books for nearly twenty-five years; had been editor of *Harpers Weekly* for more than a decade; was one of the most popular orators in America; was at the height of his fame as “Father of Civil Service Reform”; a practical, skilful and incorruptible politician; adviser to Presidents;—in short, an outstanding figure in American letters and public affairs.

Recalling all this, it is hard to explain why the average American today looks blank when his name is mentioned, and why even those who do know in a general way who he was and what he did, probably have no clear picture of the man in their minds.

He had, one would say, all the elements that usually produce a popular impression—a handsome face and figure; an impressive platform presence; unassailable personal character; social position; an aristocratic insistence on dignity and grace, combined with a religious devotion to democratic ideals; literary prestige, editorial and political power. What else does it take to make a man remembered?

The explanation probably will be found—if it is found—by students of his life and times. There are signs that Curtis is being rediscovered, though exploration has not gone far nor deep.

Curtis was born in Rhode Island in 1824, of a long and respected New England line. For a year or two in his very young manhood he lived in the famous Brook Farm community, though he was never an actual member. In his early friendships and career he was one of the influential New England literary circle. In 1856 he married Anna Shaw, daughter of George A. Shaw, a wealthy and intellectual New Englander who had first come to the Island about 1847, and had brought his family and made his home on the Island in 1855. Curtis lived on the Island from 1856, took active part in local affairs both social and political, commuted to his office in the city, went each summer to his cottage in Ashfield, Massachusetts, and was known to his neighbors as a good husband and father, a good friend and a good private citizen, as well as a national figure in whom they took pride. He died on the Island in 1892. The house in which he lived is still standing, and the

present owners are preserving it with taste and understanding; his bust is in the high school that is named for him; and yet he almost as forgotten here where he lived so long, as elsewhere.

There is one place, however, where he is still present—if not the flesh, at least visibly and in more than one aspect—and the place, appropriately, is on Staten Island, where the Institute of Arts and Sciences possesses a set of portraits which constitute a record of his personal appearance from young manhood until five years before his death. These portraits, with one exception, hang at the present moment in the office of the Institute's Museum, for lack of space elsewhere.

The exception which is not on the walls is the earliest. It is a small pencil sketch, belonging to the Brook Farm period and evidently done as a joke. Curtis, very young, is shown lying on a couch as if he had dropped there from weariness after the first work which was part of the community's program. He is sound asleep, with his handsome mouth open as if in a gentle snore. The work probably is that of an amateur, though it is not unsuccessful. In faded pencil on the ragged envelope which contains it are the words "Brook Farm" and "by Frank Farley." Also in pencil, much less faded, at the top of the sketch itself, is: "Autr of Trumps." If the sketch was made during the Brook Farm period, which there is no reason to doubt, this inscription was added later, as he did not write "Trumps" until 1860 or 1861. This is the gift of Mrs. Pierre Jay, a niece of Mrs. George William Curtis.

The rest of the portraits are in the frames in which they were kept by the Curtis family. Possibly the earliest is a crayon drawing without signature or date. The family is the authority for the statement that it was done by Curtis' brother Burrill, but just when, no one knows. It is a serious, reflective face, utterly lacking in the high spirits of which we have plenty of record. The Chris who came dancing to a picnic, dressed as Fanny Ellsler, and the Curtis who wrote the exuberant "Nile Notes" could not be guessed from it. This is a loan from Miss Constance Curtis, a niece.

The next portrait—or perhaps it was the earlier of the two—it also is without date—is in striking contrast. The face is a profile in profile. The elegant presence which is testified to by contemporary descriptions is here; the face is unlined, the curling hair effectively disarranged, the fit of the coat collar fastidious, the expression slightly cryptic, but assured. This was a young man of social standing, poised and confident. The drawing is on paper backed by fine linen cloth, and it is hard to understand why such a handsome piece of work is unsigned. On the wooden back which holds picture and glass in place, someone has scratched in the wood, so faintly that it is visible only in a cross-light, "George

William Curtis, by Rouse." Under the latter name, apparently not connected with it, is what looks like an "H".

One possibly irrelevant consideration is that S. W. Rowse, whose work brought good prices in its day, was a guest of Charles Eliot Norton in London, moved to New York in 1880, and later to Morristown, New Jersey, where he died in 1901. His period thus coincides with that of Curtis; and furthermore, Norton was one of Curtis' close and lifelong friends. The spelling "Rouse" could be a mistake of someone who wrote it phonetically from recollection. These points prove nothing at all, but might be worth investigation, in the absence of a better clue to the artist.

This interesting picture is the gift of George W. Curtis of Florida, a grandson of George William Curtis.

Then comes the portrait, also in crayon, by the British artist Samuel Lawrence, done in 1854. This also is the gift of George W. Curtis. Lawrence's standing as an artist was at its peak at this time. He had come to America with letters to important persons, and with a list of famous sitters to refer to. The donor remembers seeing among his grandfather's papers a letter from Thackeray concerning Lawrence. A letter from Curtis to Norton, dated March 11, 1854, in the possession of the Houghton Library, Harvard University, contains the following line: "I am sitting to Lawrence for my head. He brought me a letter from Thackeray, whom he knew, and he has old Rogers (done last Spring) and Carlyle * * * "

And in another letter to Norton he says (May 24, 1854): "Lawrence has rec'd a summons from Rutledge to 'do' Longfellow. If he come with me, would Longfellow sit, at this time? I don't know that he can come, now, but he asked me about it and I promised to find out."

The Curtis portrait is in Lawrence's typical style, with sharp highlights on skin and collar. The Institute also has a portrait of Anna Shaw (whom Curtis married later), done by Lawrence in the same year, in which this style is equally pronounced.

This is the portrait that was reproduced as the frontispiece of the biography by William Winter and captioned: "As he looked when I first saw him. W. W."

Winter's approval has weight, as he was a familiar neighbor of Curtis on the Island for years; but the portrait looks, in distance in time, a little too much like the way the artist probably thought American literary men in 1854 would want to look—classic, drooping, sentimental and utterly humorless. The features doubtless are rendered truthfully, but the expression is pure mid-nineteenth-century solemnity. This portrait has suffered considerably from damp or some other cause, but is a most interesting and important link in the pictorial chain.

And now we come to the last—the oil painting by Perkins, signed and dated 1887; and here we probably have the man the Island knew best; mature, solid, the lips no less well moulded than in youth, but firm; the hair graying, the famous side-burns scanty, the eyes kindly but shrewd and humorous; the strong features stronger for the lines of age. This is the gift of Bridgham Curtis of New York, a nephew.

It is admittedly hard to reconstruct a man's personality from printed, or even written, words. These portraits, which have now been brought together through the interest and efforts of the Institute and the generous co-operation of Curtis' descendants and relatives, do what words have failed to do; they bring the man himself once more, alive and real, before a generation which had almost lost sight of him, in spite of his shelf of once-popular books, his famous editorship, and his lifelong front-line battles for the causes he believed in.

INSTITUTE NOTES

Although our monthly publication, the *New Bulletin*, was designed to give our readers news of all Institute activities, there are quite a number of items which do not logically belong there, or for which we have inadequate space. Such, for instance, are the progress reports which our scientists frequently make in connection with their various research projects. These reports (especially if they are not considered at the time to justify enlargement into complete articles), together with miscellaneous articles of interest, will be included in this section under the subtitle "Science." A similar scheme will be followed for "Art," "History and Literature," and other Institute activities as the occasion and amount of material demand.—*Editor*.

Science

Investigations in such fields of natural science as come within the scope and facilities of the Staten Island Institute of Arts and Sciences are being conducted by a number of its members. At this point it may be of present and future value to give a list of these persons and their specialties. Interim reports by some of them and a review of the year's noteworthy activities and events are added to this listing.

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|------------------------|---|
| JUAN BEHM: | Physical Geology—origin of the local serpentine minerals; Mycology—higher fungi (taxonomy and field work). |
| CHARLES BRAUN: | Astronomy—Metallurgical chemistry; and the taxonomy of Conchology. |
| JOSEPH F. BURKE: | Botany—diatoms; Ecology—lower cryptogams. |
| ROSWELL S. COLES: | Historical Geology. |
| I. C. G. COOPER: | Botany—the morphology and taxonomy of cryptogams and phanerogams. |
| HOWARD H. CREAVES: | Ornithology—field work, conservation, and wildlife photography. |
| LEE A. ELLISON: | Botany—cryptogams (lichens, hepatics and mosses); Chemistry—chemical analysis of water, rocks, soils, and plant material. |
| LEONA EMRICH (MRS.): | Botany—cryptogams (bacteria). |
| ROBERT F. MATHEWSON: | Zoology and Ecology—fish, amphibians, reptiles, mammals. |
| ROBERT MEYER: | Botany—phanerogams (grasses). |
| RUTH NAUSS (MRS.): | Botany—cryptogams (myxomycetes). |
| RALPH NAUSS (DR.): | Zoology—medical parasitology. |
| ROBERT O'CONNOR (DR.): | Botany—cryptogams (myxomycetes, ascomycetes); bacteriology. |
| EDWIN RUNDLETT: | Botany—arboriculture, gardening, and plant pathology; Ecology—plant survival; Entomology—beekeeping and plant parasites. |

CASIMIR REDJIVES:

Ornithology—field work; Ecology—bird survival.

MATHILDE WEINGARTNER

Botany—cryptogams (ferns, fern allies.), phanerogams (taxonomy); Conchology (taxonomy); and Ornithology (field observation).

In the early part of November, 1951, Howard Cleaves discovered a Whistling Swan at Wolfe's Pond. This is believed to be the first record of such a bird on Staten Island. For reasons unknown the bird sought shelter at the pond and remained there for several days. Another first record was marked up by Mr. Cleaves when he brought to the Museum several eggs of the Purple Martin. There is no earlier record that this bird has ever before nested on Staten Island.

Miss Weingartner's species list of 190 birds shows the presence of two other new birds for Staten Island—the Northern Phalarope and the Stilt Sandpiper. A comparison of the bird lists of 1885 and 1951 indicates a loss of ten species. Twenty new species, however, have been added. The most noteworthy loss is that of the Passenger Pigeon, and the most noteworthy "gain," that of the Starling. Miss Weingartner plans to write an article on these comparisons.

An outstanding "first" in the botany of Staten Island was the discovery of the algae *Chlamydomonas Dysosus* by Mr. I. C. G. Cooper. Mr. Cooper, in a report in the Institute *Proceedings*, Vol. XI, No. 3, April, 1949, indicated the discovery of this algae in soil samples from the marshy source of the brook in Buck's Hollow. Samples of the algae were sent to both Dr. Northcraft of Amherst College and Dr. Ralph A. Lewin of Yale University. A similar form was described in Europe in 1932, but the present discovery is the first record of its occurrence in America. Further intensive study and a more complete report are being planned.

A note of anxiety was introduced into our thinking this year by Mr. Rundlett when he reported on a fungus disease—oak wilt—which is spreading through the East and killing off the oak trees. A short paper describing the pattern and symptoms of this disease was distributed to members of the Nature Section in May, 1951, and is available at the Museum to those interested.

The death of Mr. Charles Ericson on April 15, 1951, was a great blow to all members of the Natural History Section. His able and willing assistance in botanical problems, and his many contributions in the form of literature and additions to our study-collections made him one of the most valuable and highly regarded members of the Institute. His loss leaves a gap impossible to fill. As a memorial to Mr. Ericson the Nature Section is planning to purchase for Museum use a series of Kodachrome slides of wild-flowers of the Northeast.

Long-range planning for the exhibit area on the main floor of the Museum has resulted in the setting aside of the upright and flat cases at the north end of the building for more or less permanent types of exhibits. The south end of the main floor is to be occupied by changing exhibits, probably on a semi-annual schedule.

The ecological survey of the Clay Pit Ponds area provided material for the first of these changing exhibits. The second, to be opened in April, 1952, will be concerned with the forest trees of Staten Island, with emphasis on the oaks. The time necessary to complete a survey such as that of the Clay Pit Pond area cannot be exactly determined; and because of the fear that the garbage dumping of the City of New York may engulf the area before the work is complete, two interim reports are included in these notes. Both are the work of Lee A. Ellison.

A Study of the Claypit Pond Area

This past summer Natural History students and field workers of the Museum embarked upon a rather long-term project of thoroughly studying the area lying between Arthur Kill Road and the Fresh Kills, and extending from Muldoon Avenue westward to the tidal marshes fringing Benedict's Creek near the junction of Arthur Kill Road and Huguenot Avenue. This area has been variously known during the past century as Fertile Plain, Morgan's Point, Cedar Point, and more recently as the Claypit Ponds or Five Ponds area.

Its period¹ of use as a source of clay for brick making extended from 1869 to 1929. During this time there occurred extensive digging operations with steam shovels; many service roads and narrow-gauge railroads were laid out; many buildings of a rather temporary nature were built. Top soil was removed, pits were dug to a depth of thirty-five to forty feet, and clay was distributed over adjacent surface soil. Most of the land was stripped of its forest cover. Several brick industries came and went, none having any great permanence. The last to engage in brick manufacture was the Dolan Brick Company, with workings and brick yards near the present plant of the Vanbro Construction Company. By 1925 all of the land in the area under study had been abandoned and was growing over with gray birch, sweet gum, wild cherry, pin oak and swamp white oak.

A return of forest and herbaceous vegetation upon a tract of land that had received such man-made alterations offered an interesting subject for botanical study. All of the deep pits from which clay was taken filled with water almost as soon as work stopped. This offered an attractive field of study for the specialists in fresh-water life. Changing conditions and increased low forest growth and intrusion of grasses and reedy growth upon pond margins and swales, brought changing bird and mammal population.

The present study centers largely around ecology: a study of the adaptation of flora and fauna to unusual and rather inimical conditions. Geology and mineralogy of the area are not being overlooked.

It is much too early in the program of this investigation to draw any conclusions or to publish acceptable facts and figures. The work done so far has covered many fields of natural science, as shown by the following investigations: bird population and breeding, mammals, insects, marine biology, reptilia and amphibia, trees, flowering herbaceous plants, cryptograms, soil phenomena, geology of sands and clays and surface rocks, mineralogy of the clay and sand, chemical analysis of soil and water.

This study must cover the changing conditions presented by at least one complete year and perhaps longer, and in keeping with all truly scientific investigations, conclusions will be drawn in a series of final reports only after study of all data obtained and a correlation of the separate fields of investigation.

Natural Bas-Reliefs

Near the long-forsaken burying-ground of the Morgan Family at the northwest extremity of the Claypit Pond area has been found an unusual condition in the surface layer of sand and clay, whereon well-defined leaf prints formed by natural and purely accidental means occur.

There are several barren expanses where there is a hard-packed surface sand, featureless except for random blackened stones and pebbles, lacking any forms of vegetation. At the end of one of these barren spots there is a slight mound of mixed sand and clay, on which is a straggling growth of sassufra, pin oak, wild cherry and poison ivy. There seems to occur here a mixture of sand and clay capable of drying to a hard crust, though plastic when wet.

Leaves falling on this slightly sloping expanse cling to the cementing layer. The latter dries out after a rain except beneath the leaf, which prevents evaporation. Wind-blown sand accumulates around the margins of the leaf, becoming loosely cemented into the surface. Continued drying, possibly from wind or warm sun, shrivels the leaf and causes it by curling to become detached; later the leaf is blown away and there remains an outline which may be called either a bas-relief or an intaglio. Some of these leaf impressions are quite clear.

To a much lesser degree leaves sometimes form a temporary impression in the silt of dirt roadways, but since no cementing action occurs, the impression vanishes after the first rain. The above described outlines, however, seem to attain a permanency of at least a year.

Recent accessions of scientific material for study include borings made by the Madigan-Hyland Company of Long Island City, New York. These borings were taken from the site of the new

ferry terminal and from several spots along Richmond Terrace down as far as Jersey Street. Their value lies in the fact that never before have samples of geological strata on Staten Island been taken from so great a depth. Several of our scientists are planning to study the borings, and they are available to anyone interested in Staten Island geology.

Lucille Zigler, the Wagner College student who holds our William T. Davis scholarship, has been of great value to us these last few months. She has worked a half-day each week cleaning and arranging our bird collection in preparation for cataloguing.

The Museum has been doing a good bit of house-cleaning and re-arranging lately. As many of our members know, our excellent geology collection has been scattered in many parts of the building in hard-to-get-at places. In order to make the whole collection available in one spot, for the convenience and comfort of those wishing to see it, the largest part of the collection has been placed in a basement store-room, cleaned out for that purpose. This, in turn, is making it possible for us to clear the center of the main floor storeroom, thus giving work-space and easy access to the birds, mammals, shells and Indian objects.

ROBERT MATHEWSON
LEE A. ELLISON

Art

The Director's annual report, which will appear this summer, will give the details of this year's very active art program. In these notes I wish to chat with you about some of our plans and problems.

First, I should like to say that one of my most pleasant duties is receiving, arranging and hanging the pictures and other objects for our various exhibits. It is fun, especially when the paintings are varied in style and subject matter. I get special satisfaction because I have seen improvement, not only in the art exhibitions as a whole, but in the work of individuals as well. Improvement and enthusiasm are constant reminders that we have a wonderful potential on Staten Island. The great prospect for art here is not only because Staten Island offers interesting subject matter, but also in our friendly community exhibitions and other activities in the social nature of our organization. Concern only with a regional subject matter, or with local problems alone, often leads to a stifling of creativity. We must consistently study, learn and broaden our horizons.

But although in line with this we may plan bigger and better exhibitions, we must never lose the enjoyment of working together. The pleasure of painting, of displaying our pictures, and of meeting, and discussing topics which we hold close to our hearts, should always come first. If it's fun, it's worth while; and I write

this on the day before our annual artists' carnival. The basis of our art activities is our common love for creative painting, which is the expression of our admiration, wonder and love of nature, which includes mankind.

Adequate wall space for hanging more paintings has been a problem for some time and will remain a problem until we get that new building. We have made a big improvement, however, by adding two movable screens in the South Gallery. They have more than made up for the loss of wall space caused by exposing the windows; and with natural lighting controlled by Venetian blinds, the gallery looks much better. The next big improvement should be made in the lighting of both galleries. Many complaints are made about the fluorescent lights in the North Gallery changing the color of the paintings. It is true, especially in the case of red pigments; but we have somehow to find a solution. We also hope to be able to paint the galleries, if not for the Spring Exhibition, at least for the next Members' Exhibition in October.

We are also working on the problem of getting more and better publicity for our exhibitions. We faithfully send releases to all the city newspapers, radio stations, and art magazines, with the idea that eventually they will recognize the existence of an art movement on Staten Island. September's Outdoor Show did have good publicity, partly because of its unusual nature, but mainly because of the excellent help of Art Hedquist, of the Staten Island Chamber of Commerce, and Alice Reichenbach. We managed to crash into the *Times*, *World-Telegram*, and other New York papers; and we were even able to speak about it on two radio programs. The whole show was a bang-up success. Our attendance equalled, I am sure, any day's attendance at the Greenwich Village outdoor shows. We plan to give a repeat performance this coming fall, and I am sure it will be better than the last one.

We are also thinking of graphic art shows. The John Noble - C. D. Batchelor exhibition last November was very successful. Mr. Noble has offered his help and influence in getting the most famous graphic artists in the country to exhibit here. We're bursting with ideas and hope to have one large showing of lithographs, etching, wood blocks, and the other graphic arts each year. American galleries have never given the proper attention to graphics. Perhaps we can make up in part for this deficiency. Since our funds are low and our space limited, we cannot bring large national exhibitions of paintings to the museum, but we *can* do something big with graphic arts. It will involve some expense, of course. We should have a supply of picture glass in three standard sizes and a supply of wire brackets for hanging such pictures. And we really need special backgrounds of wall board covered with some sort of fabrics. These things are not easy to get, but the task is not impossible. We plan to work towards this as a goal, in the hope of putting on a nation-wide competitive graphic show with entry fee, prizes, important judges and all the trim-

mings—thus making a name for ourselves as one of the few places to display graphic arts.

There has been a great deal of controversy over the policy of the Art Section, the duties of its officers and committee heads, and the management of its exhibitions and other activities. One of the troubles, it has been thought, is that the Section never has had a constitution which clarifies these points. Therefore, the Executive Committee of the Art Section appointed a committee composed of Joseph Nugent, chairman, Percy Leason, Albert Bar-belle, Alfred McNamara and Gerald Bernstein to compose articles and by-laws which would make everything clear. We owe Joe Nugent many thanks for all the work he did on this. After many hours of work carefully planning the constitution, and after much discussion and many changes, the proposed constitution was approved by the Executive Committee and by the Director of the Museum. Mimeographed copies were mailed to all Section members, and at a general meeting held March 30, it was accepted.

We are all saddened by the loss of Ely Behar, who had so endeared himself to everyone by his art and his warm personality. Among our recent accessions is a painting Ely left to the museum. It is a charming painting of the Perine House, showing the dormer windows and green shutters. Ely used many beautiful greens in the picture, from olive to a very intense viridian; and as a lovely contrast there is a large, warm, brown tree at the left of the house. It is an excellent addition to our collection of Staten Island scenes by one of the best Staten Island artists.

We have planned several exhibitions for the remainder of this season which should prove of great interest to all. The annual Spring Exhibition will be followed, in the month of May, by an exhibition and program devoted to Art Education on Staten Island. There will be a large showing of the best work from the grade schools, high schools, parochial schools, Wagner College, Percy Leason's art school, and Lola Gerow's art class. We are also planning demonstrations and talks on art education for that month. Following this show and opening on June 8th will be the memorial exhibition of Ely Behar's paintings, covering his entire career as an artist.

GERALD BERNSTEIN

History and Literature

A notice in the New York Times of February 19, of the death of Bridgham Curtis, 150 East Seventy-third Street, Manhattan, comes as a regretted postscript to the article in this number of the *Proceedings* on the George William Curtis portraits. Bridgham Curtis was a nephew of George William Curtis—the son of his half-brother Edward. He was actively interested in our Curtis collection and one of the portraits mentioned in the article was given us by him.

One of this department's enjoyable duties is making its resources available to writers, genealogists and others in need of local historical information. Handicapped though we are by actual physical lack of storage and working space, serious workers generally do succeed in finding what they want, and the results often fill us with pride.

Mr. Herbert B. Reed's history of the use of electricity on Staten Island, while made primarily for the files of the Staten Island Edison Corporation, includes the history of local transportation clear back to ox-carts and stages; also the history of amusements, resorts and other Island activities requiring illumination or power. A great deal of his material was assembled, fragment by fragment, from our collection of old Staten Island newspapers and from our famous "shirt-box" files; some was found in the collections of the Staten Island Historical Society; some in libraries and historical societies in Manhattan, Brooklyn and elsewhere, and some in public records in New York, Albany and New Jersey. Invaluable facts also were secured, before it was too late, from the memories of old residents here. The whole—of which we are promised a copy—will place at the service of future researchers the most complete, detailed and carefully documented record of some vanishing aspects of Staten Island history that has yet been made.

We bow to Phyllis Whitney, writer of many successful books for children and young people, in acknowledgment of her compliment, in a recent talk before our Belles Lettres Society, to the helpfulness of this department. Two or three of her books have been set on Staten Island, and she has visited us often for her local color and facts. The most recent book, which will appear soon, is laid on the Island in the Civil War period.

A welcome visitor to the library recently was Edwin Way Teale, who came to consult the notes of the late William T. Davis. The great success of his latest book, "North with the Spring," (reviewed in this number) has not caused Mr. Teale to rest on his oars. He is working furiously on further undertakings, with publishers in full cry after him.

MABEL ABBOTT

BOOK REVIEWS

With this issue we are initiating a new policy in regard to book reviews. Heretofore we have included only books about Staten Island, or by Staten Island authors, or closely related to the Island in one way or another. Now we plan to add a number of volumes which, although they may have no direct local connection, seem to hold unusual interest for our readers. We shall pay close attention to publications in every field with which the Institute is concerned,—the natural sciences, wildlife, art, photography, music, handicrafts, and others. Naturally, we can cover in these reviews only the smallest part of the large numbers of such books published, and we know that our choice of those available will not be infallible; but every now and then books of such special merit come to our attention that we feel it our duty to mention them. We hope you think it a useful service, and we should be happy to have your comments.—*Editor*.

Revolution and Tradition in Modern American Art. By John I. H. Baur. (Harvard University Press, Cambridge, Mass. 1951. x, 170 pp. Library of Congress Series in American Civilization. Edited by R  lph Henry Gabriel. \$6.00.)

The broad task of documenting the various aspects of American civilization in the twentieth century has begun with John I. H. Baur's volume. Mr. Baur is Curator of Painting and Sculpture at the Brooklyn Museum. Ralph Henry Gabriel, editor of the series, is Professor of History at Yale University.

The author presents his subject matter in an orderly division of chapters, each dealing with a particular phase of American art. Following a survey of the arts, he discusses the revolutionary in art, both in subject matter and form, and then the traditional and impressionistic influence which was carried over from the nineteenth century by two of our greatest painters, Thomas Eakins, with his knowing realism, and Winslow Homer, with his powerful impressionism tempered by the same realism.

One chapter deals with the position of the artist in America with special reference to his financial status. Anyone contemplating a career as a painter or sculptor would undoubtedly be interested in the information revealed by questionnaires sent to prominent American artists. Their average yearly income from non-commercial art sales is \$1154.

Mr. Baur concludes his work with a consideration of the nature of the attacks on modern art and the various defenses offered.

Not the least noteworthy feature of this volume is the excellent

selection (190 in all) of black and white reproductions of many of the paintings and sculptures discussed.

The author has succeeded in making available to the layman as well as the artist a penetrating analysis of art in America and the influence its various phases had upon each other. The author frequently expresses his own opinion, but even more frequently he quotes from the writings of others active in the field of art. A lengthy bibliography is included.

ALFRED MCNAMARA.

John Burroughs' America. Selections from the writings of the Hudson River naturalist. Edited by Farida A. Wiley. Illustrated by Francis Lee Jaques. (The Devin-Adair Company, New York, 1951, \$4.00.)

It will be a pleasure to many who have enjoyed the writings of John Burroughs to see parts of them in print again. The naturalist-philosopher wrote a score or more of books during his lifetime, most of which are now out of print. Farida A. Wiley, on the staff of the education department of the American Museum of Natural History, has gleaned selections from this wealth of material and has done a superb job of editing. The crisp black-and-white illustrations from the pen of Francis Lee Jaques make a perfect complement to the text.

There is a freshness about the writings of John Burroughs that is ageless. He knew and loved his Catskills, about which most of his books were written, and preserved their flavor. His philosophy holds just as true today as when he wrote: "Most of the precious things in life are near at hand, without money and without price. Each of you has the whole wealth of the universe at your door."

There is a short foreword by Burroughs' only son, Julian, who shared his father's enthusiasm for the Catskill area and the simple things of life, and who still lives near "Riverby," the home his father built. Julian has visited Staten Island and talked about his father on several occasions.

An introduction by Farida Wiley gives a brief biographic sketch. Burroughs loved people, and most of all he liked to share his universe with people. Emerson, Walt Whitman, John Muir, Dr. Frank M. Chapman, Theodore Roosevelt,—these were old friends of his. They were entertained at his favorite retreat, "Shalsides," where much of his writing was done. Here, around the fire and over a meal of delicious "brigand steak"—chunks of beef, slices of bacon and onions, skewered alternately on a stick and roasted over the fire until "the conceit was taken out of the onions,"—these friends shared with him their understanding of the out-of-doors.

Readers of this book will delight in finding many of the favorite selections included. That the book has been well received is proved by the fact that it will soon be in its third edition.

MIRIAM C. STRYKER.

North with the Spring. By Edwin Way Teale. (Dodd, Mead. New York, 1951. \$5.00.)

A new book by Edwin Way Teale is an event anywhere, any time. But to many Staten Island readers it has an additional interest because they know that Teale shared with them the friendship of the late William T. Davis, and wrote an understanding and affectionate preface to his biography.

It is, therefore, with a little extra pleasure that we open his latest book, *North with the Spring*, and forthwith lose ourselves completely in the story of a magical journey,—a journey which other men may possibly have dreamed of, but few if any have made. Teale and his wife set out from the little community of Everglades, Florida, south of the Tamiami Trail, "where spring begins for the North American continent," and as the season moved northward they moved with it. When spring came to Georgia, they were there. When it got as far as Tennessee, they saw the winter bats leave Nickajack Cave and the summer bats arrive. In North Carolina they drove for more than a hundred miles with the wave of migrant warblers that poured past Asheville. They saw bumble bee queens starting the nests of the new year in the Smoky Mountains and baby eels coming up the rivers from the sea.

Up through Virginia they kept step with the spring,—through Maryland, Pennsylvania, Delaware, and into the pine barrens of New Jersey. This lonely region is beloved of naturalists. Mr. Davis spent much time there. Teale also found it a place of special attraction and writes of his affection for austere and somber places. Wastelands to him, he says, sometimes seem not at all wasted. He quotes Davis or refers to him in several chapters; but nowhere does the spiritual kinship of the two men appear as plainly as in this avowed affinity for areas disregarded by the unperceptive.

On they went, northward, to the headland above Cape Cod, where new leaves and tiny flowers were beginning to clothe the stunted verdure, and to Mt. Washington, where timberline birds were becoming active and alpine flowers were in bloom on its rocky top.

Teale is no mere travel-writer, though wherever he goes, the varied beauty of America stirs him to simple, sincere, skillful expression. But he carried his collecting bottle and collected to such effect that some of his finds now enrich great collections. He timed the operation of pitcher-plants and fly-traps, and catalogued the material which beach ants brought to their nests. And he carried his camera too, of course; and his photographs are like his writing, both true and imaginative.

This volume has been hailed by reviewers as the climax of Teale's distinguished procession of books. Just now, perhaps it is; but he is in the full tide of his powers, and we have every reason to hope for more climaxes.

MABEL ABBOTT.

Thunder Wings, the Story of a Ruffed Grouse, written and illustrated by Olive L. Earle. (Wm. Morrow & Co., New York, 1951. \$2.00.)

Have you ever seen a covey of grouse in the woods—and then, at too near a step, all were gone,—nowhere a movement or a peep? Olive Earle has watched them too, and in her charming book, “Thunder Wings,” she shows children by her delightful pictures how the little grouse chicks obey the mother bird and take cover at the first sign of danger, as when a hawk hovers above, or a weasel slinks in the grass.

Only someone who loves nature can write about and illustrate the doings of the wild things of the forest. But in writing for children it is not enough to love Nature; the writer has a responsibility for presenting facts as they really are. Olive Earle is a naturalist as well as an artist, and the apparently simple things she writes and draws have a foundation of close scientific study. She has had the wisdom to know that one does not need to fictionalize the forest animals to make them interesting to a child. So she presents them accurately, and the result is a fascinating and valuable little book. One sees the growth of the little wild bird, pecking its way out of its egg, sheltering beneath its mother's wings, exploring the forest ground, and finally, in its proud maturity, strutting and dancing for its mate. This story, with its pictures in black and white, will delight a child who is beginning to read for himself; and it will please the parents because it is an accurate, as well as charming, presentation of life in the great outdoors.

ALICE M. LAWRENCE.

King's Arrow. By “Joseph Patrick.” (J. B. Lippincott Company, 1951. \$3.50.)

Mr. Patrick, (who is a Staten Islander who wants to keep his real name a mystery,—and who are we to spoil his fun!) has written a most enjoyable story. Some historical novels are so busy being historical that they are not particularly interesting but this one escapes that pitfall entirely. Any reader will recognize at once that the author knows his ships and his seamen, his period and his colonial history; those familiar with Nantucket and Martha's Vineyard will probably be satisfied with their presentation. But the story is not dulled by its concern for accuracy. The characters are sharply drawn, the tale moves along with constantly growing interest, and the conclusion is effective. We will not give away the plot but we will say simply that this is a delightful book. I am sure the readers will agree with me in the hope that it is only the first of many to be written by our non-de-plumed fellow Islander.

H. CLEAVER BROWN.

American Wild Life and Plants. By Alexander C. Martin, Herbert S. Zim and Arnold L. Nelson. (McGraw-Hill, New York, 1951. \$7.50.)

This is a book every wild life manager and refuge keeper will wish to have within arm's reach on his work table. This 500-page

volume will prove of value also to landscape gardeners, estate owners, sportsmen, the staffs of state conservation and fish and game departments, and to individuals such as bird watchers and anglers whose avocations bring them into contact with living things in nature. *American Wildlife and Plants* is primarily an ecologist's handbook, ecology being the broad subject of biology dealing with the "mutual relations between organisms and their environment." The trained ecologist nowadays is of necessity a person possessing vast knowledge, information and experience in his field. His background is comparable to that of a doctor, a chemist or an engineer. Yet even a housewife, looking out of her kitchen window as she does the dishes, learns a simple lesson in ecology when she observes a robin or a cardinal eating honeysuckle berries on the backyard trellis.

One third of the triple authorship of this book is represented by Herbert S. Zim, Associate Professor of Education at the University of Illinois. The other two thirds are Arnold L. Nelson, Director, Patuxent Research Refuge, Laurel, Maryland, a U. S. Fish and Wild Life Service project; and Alexander C. Martin, a government biologist at the Patuxent refuge. There are more than 700 illustrations, the majority being single column outline maps of the United States, state outlines omitted, with shading and crosshatching to denote the ranges of species under discussion. Throughout the book are excellent pen-and-ink line drawings of selected subjects, reproduced single column width; but half-tones and color illustrations are absent.

No modern researcher in natural science seems capable of expressing himself without the use of charts, graphs, tables, diagrams and symbols. These are the daily working tools of the ecologist's craft. Through constant use the practitioner memorizes each symbol and its meaning and can make lightning interpretations in the manner of a skilled pianist who reads a sheet of new music. If the reviewer intended to make very frequent use of this work he would type the "Star System of Rating" (page 31) on a slip of paper to be used as a book mark, thus saving himself the constant necessity of leafing back through the book.

American Wildlife and Plants contains many readable chapters such as "Farm Crops and Wildlife", "Birds of Prey", "Upland Gamebirds", "Songbirds", etc. The reader learns that there are 33 cultivated and more than 40 wild plants visited by humming birds in the United States; that the woodcock lives on a diet consisting of about nine-tenths animal matter and that two-thirds of the nine-tenths consists of earthworms exclusively. Explaining that professional work on the food habits of wild life began in 1885 in this country, the authors appropriately cause to be reproduced on page 27 a facsimile of card No. 1 in a file now containing more than a quarter of a million cards indexing food-habits information which has been accumulating in Washington, D. C., for sixty-seven years. Card no. 1 pertains to an adult male

song sparrow collected at Sing Sing, New York, at 6 p.m., July 3rd, 1885, by C. Hart Merriam, who later became the first chief of the old U. S. Bureau of Biological Survey, now the Fish and Wildlife Service.

Scattered through countless books, periodicals, pamphlets and reprints are miscellaneous, isolated records and observations concerning what animals eat. To locate desired information at such sources would be a tedious research job at best. In *American Wildlife and Plants* Martin, Zim, and Nelson have brought together between the covers of one book the sum total of scientifically discovered information as to what animal eats which foods. The work is broadened in value beyond what it might have been under other auspices in that it contains information on the food preferences, not only of birds, but of mammals, fish, amphibians and reptiles. The mammals are even subdivided into fur and game mammals, small mammals and hoofed browsers.

The authors of *American Wildlife and Plants* have done far more than write a book. They have justified the existence of those musty, voluminous government files down there in Washington and the expenditure of every dollar paid to field workers and the patient laboratory people who have spent years peering through binocular microscopes identifying fragmentary elytra, grasshopper legs, and weed seeds. Indeed, this book can be said to go far toward justifying the existence of the old Biological Survey and the present Fish and Wildlife Service, a justification which has been needed periodically in the past when selfish interests and politicians have demanded that the bureau be abolished.

HOWARD CLEAVES.

Oratam of the Hackensacks. By Geraldine Huston.

Privately printed and distributed by the author, Mrs. H. H. Huston, of 571 Cumberland Avenue, Teaneck, New Jersey, without benefit of blurb or promotion, this little book—which is a short account of Indians and Dutch in seventeenth-century Northern New Jersey—has interest for students of the Indian period on Staten Island also. It is primarily a biography of Oratam who, known to his people as Peace Chief, acted on occasions as mediator with the Dutch during that troubled time; but its background includes many references to the Island. The Hackensacks came here in summer to gather oysters, the chiefs of the neighboring groups often acted in concert in important negotiations, and there is a tradition that Oratam's body was brought to the Island and buried in one of our Indian burial-grounds.

Mrs. Huston seems to have studied her documents carefully and to be well acquainted with Indian traditions and customs. Those interested in identifying the tribes which inhabited this part of the country may find helpful material in this modest booklet.

MABEL ABBOTT.

OUR CONTRIBUTORS

EDWIN RUNDLETT

Arboriculturist of the New York Park Department, Borough of Richmond; President of the Men's Garden Club of Staten Island, and of the Staten Island Beekeepers' Association. Fellow of Staten Island Institute of Arts and Sciences.

ROBERT C. MEYER

Inspector with the New York Board of Health. Long interested in botany, specializing in the study of local grasses.

MATHILDE WEINGARTNER

Nurse by profession, naturalist by avocation. Vice President of the Section of Natural History of the Staten Island Institute of Arts and Sciences, and one of the Institute's most valued and versatile volunteer workers.

MABEL ABBOTT

Former newspaperwoman. Curator of History and Literature of this Institute.

GERALD BERNSTEIN

Curator of Art in this Institute. Master's degree in Art History, from the Institute of Fine Arts of New York University.

ROBERT MATHEWSON

Curator of Science of this Institute. Formerly with the Department of Education of the New York Zoological Society; also with Staten Island Zoological Society in charge of reptiles.

LEE A. ELLISON

Chemist. Research Associate of this Institute; former President of its Natural Science Section.

MIRIAM CAMPBELL STRYKER

Naturalist. Instructor in Department of Education, American Museum of Natural History. Directs activities of Forest Hills Children's Museum. Friend of Julian Burroughs, whose father's book she reviews in these *Proceedings*.

ALICE LAWRENCE

Librarian. Retired, after thirty-three years in the New York Public Library.

H. CLEAVER BROWN

Retired. Enthusiastic observer of local birds. One of the volunteer workers who daily help in the actual work of this institution.

ALFRED MCNAMARA

Illustrator, and designer of stage settings. Has exhibited at the Brooklyn Museum, the Staten Island Institute of Arts and Sciences, the Newark Art Club, and in London, where he won a prize in a show sponsored by the Eighth Air Force.

HOWARD CLEAVES

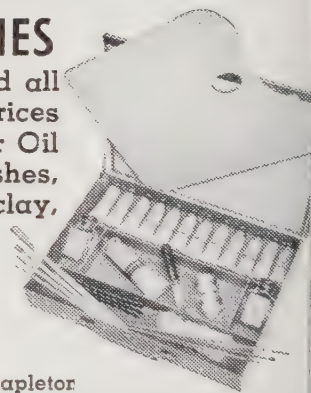
Ornithologist, wild-life photographer, lecturer. Member of the Institute's Board of Trustees.

Those who have bought space in the advertising section of the Proceedings have proved themselves real friends of the Institute and its educational, cultural, and civic program for Staten Island. We call our members' special attention to them and take this opportunity of thanking them.

Editor.

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Proceedings

of the

STATEN ISLAND

INSTITUTE OF ARTS

AND SCIENCES

Volume XIV

Fall 1952

Number 2

Staten Island Institute of Arts and Sciences

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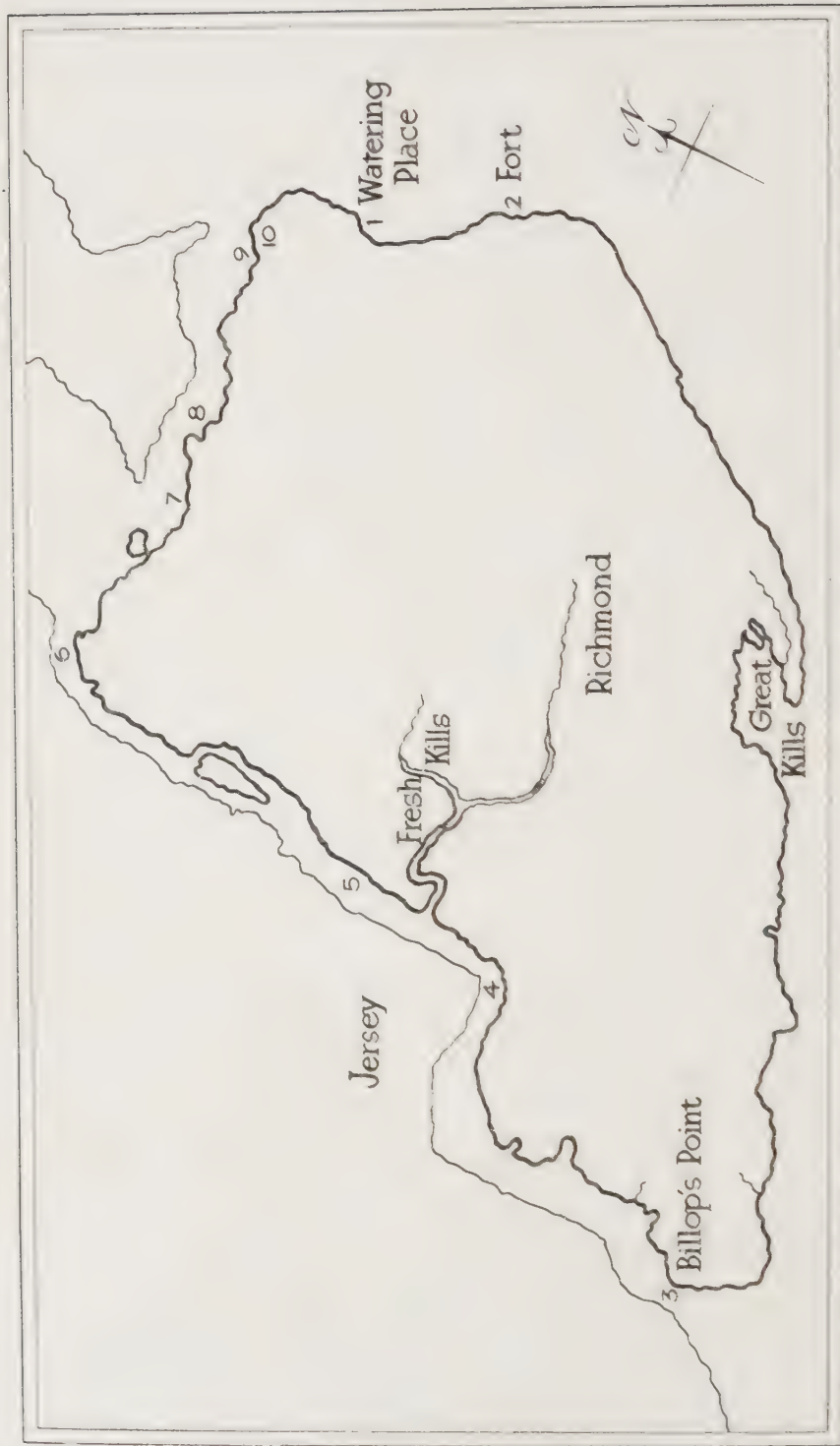
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PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES

Mabel Abbott, Editor

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Colonial Staten Island Ferries
(Figures indicate sections describing the ferries.)

THE COLONIAL FERRIES OF STATEN ISLAND*

KENNETH SCOTT

During the Colonial Period Staten Island's ferries were a necessity to its inhabitants, as they provided the only link with Manhattan, Long Island and New Jersey, and, in addition, they afforded transportation for travellers between New York and the colonies to the south. Previous discussions of the ferries afford accounts which are incomplete and in some instances incorrect. The present study is an attempt to give as accurate a picture as possible of the establishment and location of the ferries on the island and to indicate their successive owners and operators. In some cases, notably those of the upper and lower ferries at the Narrows, there does not appear to be sufficient data to fix the unbroken succession of keepers. Material may be discovered to supplement or change some conclusions reached in this paper,

*Prof. Scott's monograph, of which six sections are presented here, is the first thorough study of the early ferries of Staten Island. Documented in detail, and based in part on original sources hitherto overlooked, it corrects some errors which have been repeated by generations of local historians, and clears up some long-standing confusions. The concluding half of the article will appear in the spring issue for 1953.

The author desires to express his indebtedness for information to Mr. Loring McMillen, of the Staten Island Historical Society, the Library of the Staten Island Institute of Arts and Sciences, Miss Edna L. Jacobsen of the New York State Library, Mr. Charles E. Baker and the staff of the library of the New York Historical Society, Mr. Maxwell Volins, of the Hall of Records of New York City, and Mr. Kortright L. Stephens.

We take satisfaction in presenting an article which is not only a delightful picture of the Island's first ferries and ferrymen, but also a foundation on which future research may safely be based. — *Editor.*

but it is hoped that the article will serve as a starting point for future investigation of this important phase of life in Colonial Staten Island.

I. THE UPPER FERRY AT THE NARROWS

There was a ferry, near the foot of the present William Street, not far from the Watering Place at the Narrows, as early as 1708, for on October of that year the Commissioners of Highways describe a road "beginning at ye fferry by the watering place from thence along as the Road hath been Some years used, to Stony brook" and then continuing to Captain Billopp's against Amboy. ¹ The history of this ferry is closely connected with that of the ferries operated from Long Island. In November, 1710, Peter Cortelyou, on his own behalf and that of his brother Jacques, presented a petition to the governor. They had heard that Hendrick Hendrickse, who had married their sister, had asked for a grant to be the sole ferryman from New Utrecht, on Long Island, to transport from his landing over the Narrows to Staten Island and other places. As they had boats and conveniences for that purpose, the grant of the sole privilege to Hendrickse would be "pernicious" to the petitioners and they therefore requested, not that Hendrickse or any other person be barred from being ferryman, but only that they might have the right to ferry also. ²

It would appear that John Fontaine used Hendrickse's ferry in November, 1716, for he writes in his journal that he went from New York to Long Island and "reached Hans Hendrick's house. The ferryman endeavoured to cross the ferry from thence to Staten Island, but had to put back, so we dined at Hendrick's . . . At five, we got into the boat again, and with much difficulty crossed to Staten Island, then we mounted our horses and came to one Stuart's, and inn on the road, about seven miles from the ferry, where we supped and lay all night." Thence Fontaine proceeded to Billopp's ferry, whence he crossed to Amboy. He had, in the preceding month, landed on Staten Island, where, as he wrote, he "came to the Ferry between Long Island and Staten Island, which is about one mile broad," and after crossing to Long Island put up at the house of a Dutchman named Hendricks. ³ It would seem likely that in his crossing from Staten Island in October Fontaine used the lower ferry at the Narrows and prob-

ably he also crossed to it in November, though it is possible that Hendrickse's boat may have landed him at the upper ferry.

It is not known what action, if any, the governor and council took concerning Cortelyou's petition in 1710, but on September 24, 1719, the Cortelyou brothers again petitioned to be maintained in the right which they inherited from their father to ferry from Nyack or Jacques Bay to Staten Island, free from hindrance from their brother-in-law, Hendrick Hendrickse, or others, as they and their father had had the privilege for almost fifty years.⁴ A committee of the council on October 8, 1719, reported that the Cortelyou brothers and their father before them had ferried for some thirty or forty years from Long Island to Staten Island but that a grant had been made to Hendrick Hendricks and Isaac Hansen to keep the sole ferry at the Narrows on Long Island for the term of twenty-one years. It was the opinion of the committee that it would be of public advantage for the Cortelyous to enjoy their former privilege of ferrying over from Jacques Bay,⁵ and it seems clear that the opinion of the committee was followed by the council.

There appears to have been no further contention until April, 1740, when the governor was again the recipient of further petitions, and the date would indicate that a patent had been granted the Cortelyous in 1719 for a term of twenty-one years and that it was about to expire. In any event, on April 3, 1740, two petitions were laid before the council. One was signed by Jacques Cortelyou, Sr., Jacques Cortelyou Jr., Hermánes Borkelo, and Simon Simonson, all residents of New Utrecht and holding their lands by the general patent of that town. They set forth that their properties ran along the bay and bounded upon the water, "whereby they held themselves to be safe and entitled to all privileges, but their predecessors were advised to obtain grants of the Government to keep ferrys from their Shore to Staten Island & elsewhere, which was accordingly done, and the said grants being Expired & near expiring and not being willing to be obstructed In their privileges which they have enjoyed peaceable many years past . . ." They had, they stated, been advised to apply to the governor and therefore requested a patent for the soil from high water to low water mark along the Narrows and bay as far as their land extended and also the right to keep ferries to Staten Island and elsewhere.⁶

On April 12, 1740, a caveat against granting the above petition was entered by Cornelius, Jose, Rutger, and Nicholas Van Brunt, George Lott and Thomas Pollut, and a hearing before the council was set for April 24.⁷ On that date the council ordered that the petition of the Cortelyous and their associates be withdrawn and another be prepared setting forth the matter in a clearer light,⁸ and thereafter there is no further reference to the business in either the minutes of the council or in the land papers, so that the whole matter may have been dropped.

The other petition presented on April 3, 1740, was that of Thomas Stillwell of Kings County for a patent for a ferry from Kings County on Long Island across the Hudson River to Staten Island. It was to be operated between the northerly corner of the hill on Long Island called Yellow Hook and the southerly corner of the land of William Berkaloe; and, on the Staten Island side, between Cline Jacob's Point (at what is now Fort Wadsworth) and the northerly corner of Staten Island at the mouth of the river there called the Kill Van Kull.⁹ Stillwell stated that for many years he had been engaged in ferrying from Long Island to Staten Island and that he had been advised by neighbors and acquaintances to apply for letters patent "for the establishing and sole keeping" of such a ferry.¹⁰ On August 5, 1740, a committee of the council, presided over by Mr. Horsmanden, reported in favor of granting Stillwell's petition, save that the patent to him was not to exclude "others upon Staten Island." The report was approved, and the council ordered that a copy thereof and a copy of the ferriage fees that had been settled be given to the attorney general, who was directed to prepare letters patent to Stillwell.¹¹

The patent, dated October 13, 1740, granted the ferry rights "forever" to Stillwell and his heirs, on condition that a yearly rent of two shillings six pence be paid to the collector general at the custom house on Lady Day, March 25. Further, sufficient boats in good repair and a suitable number of able servants or agents must be provided to keep the ferry. The table of fees was as follows:

For every person, (where there are several passengers), nine pence; for one single passenger, one shilling, six pence; for each man and horse, two shillings; for all horned cattle from two years old and upwards, each two shillings; for all colts and horned cattle

under two years, each one shilling; for every score of sheep, lambs, hogs, sows and pigs, five shillings and so in proportion for any greater or lesser number; for every full barrel, nine pence; for every empty barrel, six pence; for every full pipe or hogshead, three shillings; for every firkin or tub of butter, three pence; for every bushel of wheat or other grain or seeds or salt or any thing usually measured and sold by the bushel, one half penny; for every wagon, cart or other carriage, three shillings; for every pair of cart or other wheels, one shilling; for every cupboard, press for clothes or writing desk, three shillings; for every full trunk or chest, one shilling; for every empty trunk or chest, six pence; for every gammon, fitch of bacon and piece of smoked beef, one half penny; for every hundredweight of gunpowder, one shilling; for every hundredweight of iron, steel, shot, pewter, lead and of iron, copper or brass kettles or pots, nine pence, and so in proportion for any greater or lesser quantity; for every hundred of shingles, six pence; for every bed, bedstead and bedding together, one shilling and six pence; for every chair, one penny; for every small table not above three foot over, four pence; for every larger table, eight pence; for every case of bottles, six pence; for every looking glass of one foot, four pence; and so in proportion for all other goods for which no provision is made by the above table of fees.¹²

The point on Staten Island to which Stillwell desired to send his ferry boats was between Cline Jacob's Point and the northerly corner of the island at the mouth of the Kill Van Kull. This must have developed into what was called the Upper Ferry at the Narrows, situated near the Watering Place, as distinct from the Lower Ferry at the Narrows, which had been granted by patent to Dove and Bellue in 1713. The first recorded keeper of the Upper Ferry on Staten Island was Silvanus Seamans, whose advertisement in a New York newspaper in 1745 reads as follows: "Silvanus Seamans who keeps the Upper Ferry at the Narrows on Staten-Island Side, having good Boats for that Purpose, proposes, besides the proper Attendance at the said Ferry, constantly to keep a Passage-Boat to go from thence to the City of New-York, which will certainly set out every Tuesday and Friday and return the same Day, if possible, and at any other Time if Passage or Freights presents: All Gentlemen and others may depend on the best Usage and Care, either of themselves, Horses, or Goods of any kind: He also keeps very good Entertainment for Man and

Horses. On either of those Days the Boat may be found in New-York, by enquiring at Mr. John Cregier's a Corner-house at the Old Slip." ¹³ On January 21 of the same year he was living on a plantation of 190 acres on the south side of Staten Island and was offering the estate and also a good twelve-ton sloop for sale. At that time he also owned a house near the Slaughter House in New York City. ¹⁴

It is probable that the next keeper of this ferry was named Smith, for in 1753 one John Lane advertised that he kept the ferry at Yellow Hook, six miles below the New York ferry on Long Island, that he had provided good boats, well fitted, with proper hands, and that he would be "ready at all times (wind and weather permitting) to go to Smith's Ferry, on Staten Island, with a single man only." ¹⁵ Smith is further identified as Gersham Smith by a deed dated April 30, 1754, which mentions "the Ferry at the Narrows now kept by Gersham Smith." ¹⁶

If Smith's ferry was the Upper Ferry at the Narrows, as seems to have been the case, it did not long remain in his hands, for by March 1, 1756, the Upper Ferry was being kept by John Watson. ¹⁷ In fact, it seems that Watson took charge of the Upper Ferry soon after he disposed of his ferry on the north shore of Staten Island in September, 1755. ¹⁸ His ferry at the Narrows was a regular stop for the stage of Joseph Richards, which travelled to and from the Billopp ferry to Amboy. ¹⁹

At the close of 1759 John Watson distinguished himself by a rescue, of which the following account was printed: "Thursday last a Boat belonging to the Jersies, was overset between the Battery and Nutten Island, in a squall of Wind, by which accident a Man was drowned. The rest (3 in number) were taken up by Mr. John Watson, of a Staten Island Ferry Boat, who has always shown himself assiduous upon such Occasions, and for which, he merits the Applause of all generous Minds." ²⁰

Another rescue by Watson was noted in the Pennsylvania Gazette of Jan. 10, 1760, p. 2, under a New York date line of December 31, 1759.

Thursday last a boat belonging to Mr. Randle, at the Blazing Star, in New-Jersey, in endeavouring to beat out of the Harbour, overset almost opposite the Exchange, and turned Bottom upwards: There were four people in her, three of which got on her Bottom, and remained

there until they were taken off by Mr. Watson, in his own Boat, who then lay at the White-Hall Slip, and boldly ventured to their Relief; the fourth Person, named Nugent Kelly, a Schoolmaster at Woodbridge, perished, he having missed the Boat when she turned over, but supported himself on one of the Hatches, where he died of the Cold, but was taken up by a Boat belonging to his Majesty's Ship the Loe, now in our Harbour, who put off to the Boat as soon as she overset.

Watson's part in transportation between New York and Philadelphia is shown by the following advertisement of Westward and Eastward stages in the year 1763: "This is to inform the Publick that a good Stage-Boat is kept by John Watson, which, on Mondays and Thursdays sets out from New-York to Elizabeth-Town; where a good Stage-Waggon, kept by William Richards and John Thompson, will be ready to receive Passengers, and proceed directly to New-Brunswick; from which a good Stage-Waggon kept by Daniel Corsen, will proceed on Tuesdays and Fridays, to Mr. Parker's at Trenton Ferry; where it will be met by a Stage-Waggon from Philadelphia, kept by Jonathan Biles; which, after exchanging Passengers, will, on Wednesdays and Saturdays, return to Philadelphia, as the said Corsen's Waggon will return to New-Brunswick; where it will be met by the said Richard's and Thomson's Waggon; which will set out for Elizabeth-Town; where a good Boat will be ready to proceed with Passengers to New-York."²¹

In August, 1763, one of Watson's boats met with disaster, as is recounted as follows in a New York newspaper:

About 6 o'clock last Wednesday Evening, in a Squall, one of Mr. Watson's ferry Boats, overset, near Robin's Reef about three Miles from Staten-Island; she immediately sunk down, and every person on board being (being 9 in number) But the ferry Man, who swam to the shore, was drowned. Their Names are, Mr. Robert Kennedy, a Scotch Gentleman, and M. De Loge, both lately from Surinam; Mr. James Anderson, a Scotch Gentleman, also from Madeira; Mr. David Gammel, and one Mr. James Morrison, (both Scotch Gentleman likewise, the former having resided here many years, but the latter only a few months,) Mr. N. Chapman, a young Gentleman from Philadelphia, who but a few Months since inherited an Estate of £20,000; Mrs. Henderton, and Mrs. Reynolds, wife of Capt. Reynolds, now at Sea; and a Negro Boy belonging to M. De Loge. None of the Bodies of

the above-mentioned unfortunate Persons are yet found, tho' a sharp look out has been kept in the Bay for that Purpose; and 'tis something remarkable, that tho' there were many Boats in the Bay at the time the Squall came up, not one of them received the least Damage, tho' several of them were to wind ward of Mr. Watson's Boat when she was overset.²²

Seven, at least, of the bodies were soon recovered, for the same newspaper on August 29 reported: "On Monday last the Bodies of Mr. James Anderson, and N. Chapman, and on Tuesday Mr. R. Kennedy, were buried at Richmond Church Staten-Island, also on Monday the Bodies of Mr. James Morrison, and Mr. David Gammel, and on Tuesday Mr. De Loge were buried on Constable Point, New Jersey, and Mrs. Reynolds at Trinity Church at this city."

In February, 1769, John Watson notified the public that his farm and ferry would be sold in March. One of his advertisements gives an excellent description of his establishment and the business in which he had been engaged. It reads:

The Subscriber intending to remove to New-York will dispose of the Ferry and Farm that he now lives on (being on the East End of Staten-Island) by Way of Publick Auction, on Thursday the 19th Day of March next: "The many Conveniences, with the Pleasantness of the Situation of this place, would take up too much for an Advertisement, to point out the Whole of them; so shall be content to mention a few of the Particulars. In regard to a Ferry, it is the best situated on the Island, as the Boats can go and come from New-York with most Winds, and but one Tide to encounter with, which is of great Ease to the Passengers, and is the Reason that it is more frequented than any of the rest of the Ferries; it has also a considerable Run for carrying Passengers to Long-Island, which brings in a handsome yearly income. Most of the Shipping that goes out of New-York anchors just opposite the Door, being the Anchoring-Ground for the Watering-Place,²³ which make it not only very pleasant, but of considerable Advantage to the Place, in carrying the Passengers and Ships Crew backwards and forwards to New-York: It also occasions a great Run to the House, which is the very Sinews of a Tavern. The Boats that attend this Ferry are often employed to run down to the Hook, with Dispatches for the Vessels that may be there, and the Men of War which often lie here, employ them to bring their Ships Stores, etc. from New-

York. There is an excellent Dock for the Conveniency of the Boats; and the best Roads on the Island are from this Place to Amboy, the Old and New Blazing-Star, and Elizabeth-Town Point, the Ferry and twenty Acres of Land will be sold by itself: There is also sixty Acres more with a sufficient Quantity of Wood Land on it, will be sold with the rest or separately, as it may best suit the Purchaser. On the Twenty Acres that belong to the Ferry, twenty Tons of choice English Hay have been cut there this last Season, and as much more may be cut in a short time with very little Expençe. There is Plenty of Pasture, a good Barn, Stable, and two other Out-Houses, all on the above mentioned Lot. The situation of the Place is extremely pleasant, the House standing on a rising Ground, which commands an agreeable Prospect of the City of New-York on one Side, and the Narrows on the other: The Garden that is before the Door, is laid out in pretty Taste, and has been lately railed in and painted in the handsomest Manner. There is plenty of Fish, and Game in the proper Season to be had at this Place. It is a delightful Situation for a Gentleman, and it has all the Conveniency that is requisite for a Ship Carpenter: It is also well situated for a Farmer, the Land being rich, well cleared and drained. The whole farm is under good new Fence, and great Advantage may be made by Gardening being only nine miles from New-York Market.

Whoever purchases the Whole, will have a great Advantage in saving their Pasture, as there is a fine Outlet and Shore for grazing. Any Person inclining to purchase the above premises may come and view them, and know the Conditions of Sale, by applying to the Owner before the day of sale.

John Watson

At the Time there will be sold, Three very good Boats, which are now in good Repair, and well calculated for the Conveniency of the Ferry. Also, a genteel covered Wagon, a Curricule, with a good pair of Horses, a fine breeding Mare, with other Horses, Cows, Hogs, and many other Articles too tedious to mention. A likely Negro Fellow, can be well recommended for a Coachman and Hostler; and a sober honest young Wench, can be recommended as a good Cook, to be sold at private sale.²⁴

The purchaser of Watson's ferry was William Douglass, who had for many years been in charge of the Van Tuyl ferry. Douglass advertised his newly acquired ferry to be let on reason-

able terms,²⁵ and by early June, 1769, it had been taken by Darby Doyle, as the following notice in a New York newspaper shows: "Darby Doyle now lives on Staten Island, at the Place where John Watson lately lived, and where all Travellers may depend on the best Entertainment for themselves and their Horses. The Ferry from Staten-Island to the Whitehall, in New-York, is also kept by the said Doyle, who has excellent Boats, and good Hands to attend them."²⁶

Almost six years later, in February, 1775, it was announced in the press that "the well known ferry now occupied by Darby Doyle, near the watering place, on Staten-Island, with the house, barn and dock, and 20 acres of good land well fenced with a boat, two horse colts, and two cows" was to be sold at public vendue on March 3.²⁷ From the use of the word "occupied" it may well be that Doyle was a tenant of William Douglass. If so, Doyle would seem to have bought the ferry at the advertised vendue, for Doyle owned the ferry on August 14, 1775, when he offered it for sale at public vendue on September 28 and stated: "An Indisputable deed will be given by Darby Doyle, present possessor."²⁸ Whether Doyle disposed of it at the vendue in September, is not indicated, but it is probable that he sold it at that time to Abraham Cole, for the ferry was referred to during the Revolution as "Cole's" and is so indicated on a map of the period.²⁹ By June, 1777, it was being kept by a Captain William Leake.³⁰

II. THE LOWER FERRY AT THE NARROWS

The Lower Ferry at the Narrows, near the present U. S. Public Health Service Quarantine Station at Rosebank, was officially set up in 1713 as the result of a petition made on November 6, 1712, to Governor Robert Hunter by John Dove and John Bellue. The petitioners stated that at a place known as Sand Bay on the easternmost part of Richmond County there was a spot considered by most of the inhabitants of Staten Island to be very convenient for keeping a ferry to transport persons and goods to New York, Long Island, and other adjacent places. There was they pointed out, a road to this site, and they requested that they might be permitted to erect a small ferry house upon this road and keep their ferry unhindered and unmolested. Two justices of

the peace, Nathaniel Britton and Lambert Garrison, signed the document in token of their approbation.¹

The petition was read on November 6 to the council and referred to a committee,² which, it was decided on November 13,³ was to meet on the following Monday at three o'clock to hear any objections that might be raised. Since some of the Staten Islanders who lived near the proposed ferry site had signified their consent and since the matter seemed to be for the public good, the council on November 22 advised the governor to grant to Dove and Bellue a license to keep a ferry and build a ferry house for the term of thirty years at and under such rates and duties as should later be settled by the governor and council.⁴

On November 27 the council ordered a committee to settle the ferry rates, and the following table of rates to be paid and allowed to the ferrymen was drawn up:

To Long Island:

for a horse and man, three shillings; for a single person, one shilling six pence; if two or more, apiece nine pence; for an ox, cow or horse, one shilling six pence; for a sheep, hog or calf, four pence, and the like back to Staten Island.

To New York:

for a single man, or man and horse hiring the boat, six shillings; if two men and two horses, each man and his horse, four shillings; if three men and three horses, nine shillings; for every person going with company, nine pence; for a quarter of beef, hog, calf or sheep, each, four and one half pence; for a hogshead or pipe full of anything, two shillings; for a barrel full, six pence; for each hundred weight of all other goods, six pence; for all sorts of grain per bushel, one pence; for a firkin or runlet of six gallons full, three pence; for empty casks small tonnage, per ton, three shillings; for a ton of flour, six shillings; and the like in proportion for all other things and the like ferriage from New York to Staten Island.⁵

The committee's report was accepted by the council on April 2, and it was ordered that a warrant be prepared for the attorney general to make ready a patent pursuant thereto for twenty years under a yearly quit rent of three shillings, with a reservation for free transportation of expresses.⁶

Just when the lower ferry ceased to be operated by Dove

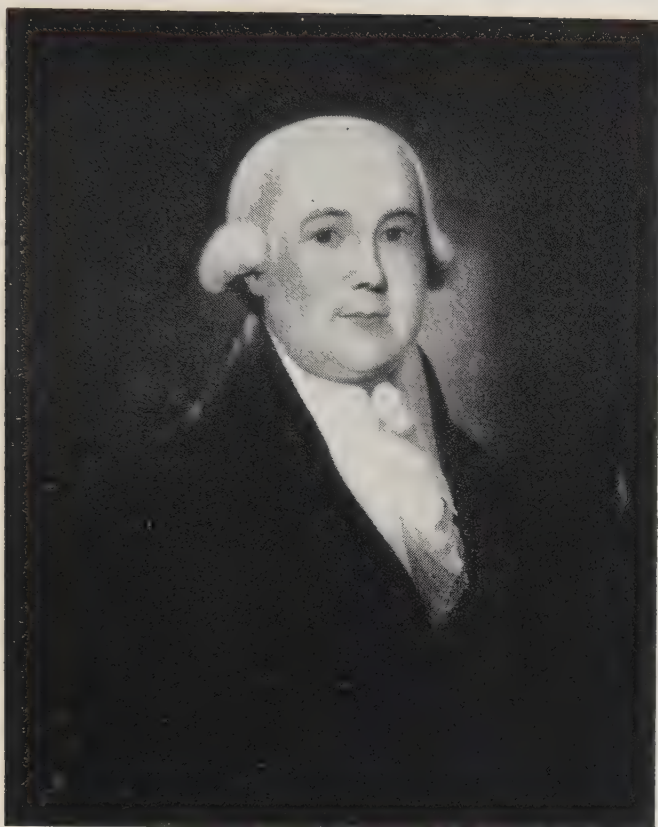
and Bellue is not known, nor is it clear whether the property passed from their ownership directly to Isaac Simonson. Such may have been the case. In any event, the following advertisement in a New York newspaper shows that he had been the owner for an indeterminate period up to about 1770. The item reads:

To Be Sold. The noted farm and ferry of Isaac Simonson, deceased, situate at the Narrows, on Staten-Island, containing 160 acres of good land for grass or grain, with plenty of wood for the New-York Market, being but 9 miles distance, and commands a beautiful prospect of the same, with the sight of all the vessels, boats, etc. as they pass and repass, in the way to and from the port of New-York. Handy for fishing and fowling, there is on said farm, a house and large cedar barn, a good wharff, and a young bearing orchard of 200 of the best engrafted trees, a cedar swamp with good timber for Rails, etc. in the middle of the said farm, the whole being water'd, having in many places good springs and brooks, there will also be sold, a lot of salt meadow, containing 16 acres, as good as any on the island, not above 2 miles distance, also a ferryboat, and a deck boat, fit for fishing or carrying freights. Likewise some negroes brought up to the ferrying business; the Roads from Perth Amboy, the old and new Blazing Star leads down to this place, from whence passangers are ferryed over to Mr. Dennis's on Long-Island; which is 2 miles distance, this ferry has been kept for seventy years, being as healthy and pleasant -situation as any on the island. Any person inclining to purchase the same, may enquire of Mr. Garret Rapalje in New-York; or apply to Frederick and Jeremiah Simonson, on the premises, who will give indisputable title for the same.⁷

It would seem that the ferry was not disposed of at this time, for in March, 1777, Frederick Simonson offered for sale his farm and ferry at the Narrows.⁸ Frederick may have been operating the ferry since 1770 or he may have let it to one or more persons.

III. THE BILLOPP FERRY

A very early ferry was that at the foot of Amboy Road across from Perth Amboy. It has been stated that it was being operated as far back as 1650 by the Raritan Indians, who were



Colonel Christopher Billopp
(American School, 18th C.)

*Courtesy of Mr. Kortright L. Stephens and the
Frick Art Reference Library*

on friendly terms with the Dutch, and that not much later it was found necessary to have a place for the protection of passengers who were waiting, and a small cabin was built.¹ By May, 1709, and probably before that date, the ferry was being kept by Captain Christopher Billopp,² who had come to New York in 1674 with Governor Andros. Billopp's daughter, Anne, married Colonel Thomas Farmar (or Farmer) in 1705, and he was residing at the ferry and was in charge of it in 1716. In that year Fontaine wrote that, after crossing from Long Island to Staten Island, he "came to one Colonel Farrier's (an error for Farmar's) house, where the ferry is kept, and we got ferried over to Amboy."³ It was Farmar who caused a small buliding, the ferry tavern, to be con-

structed about 1740.¹ It may be noted that at about the time given for the construction of the tavern there appeared the following advertisement in a New York newspaper: "These are to inform all persons, that there is a ferry settled from Amboy over to Staten Island which is duly attended, for the convenience of those that have occasion to pass and repass that way. The ferriage is fourteen pence Jersey Currency, for man and horse and five pence for a single passenger."⁵

The ferry to Amboy remained for many years in the possession of the Billopp family. Thomas Farmar, the third son of Anne and Colonel Farmar, assumed the name of Billopp and inherited the estate, and one of his sons, the Tory, Colonel Christopher Billopp, owned the ferry at the time of the Revolution.⁶ The family, however, did not always take direct charge of the operation of the ferry, for by January, 1757, if not earlier, the ferry was being kept by one Isaac Doty (or Dote), for at that time Joseph Richards advertised that his stage on Staten Island would proceed from and to Dote's "opposite to Perth Amboy."⁷ It may be noted that during Doty's occupancy there was one interruption in service, though surely of brief duration, as is indicated by the following notice which appeared in a New York newspaper on the last day of 1759: "It need not be expected the Amboy or Blazing Star Ferry-Boats can perform their useful stages this Week, as they are fast in the Ice."⁸

It appears that Isaac Doty conducted the ferry until his death, which presumably occurred early in 1774, for in March of that year Margaret Doty, executrix, and Samuel Doty, executor, then "living at said ferry," announced the forthcoming sale at the ferry house on April 11 of the "stock and other moveable estate of the late Isaac Doty, deceased among which are, a negro man between the ages of 20 and 30 years. He understands the ferrying business, is handy about a house, and used to attending a ferry boat, which last business he has been chiefly employed in for these four or five years past."⁹

Perhaps Samuel Doty intended to run the ferry himself and had no need of the trained boatman, though it seems more likely that he and Margaret had no interest in carrying on Isaac's profession of ferryman and innkeeper. In any case the ferry remained in the hands of Colonel Christopher Billopp until May 1, 1781, when he deeded the ferry to one Samuel Ward,¹⁰ doubt-

less with the intent to leave as little property as possible for the American authorities to confiscate if the British should evacuate New York.

IV. THE OLD BLAZING STAR FERRY

On February 13, 1722, Governor William Burnet issued letters to Anthony Wright of Smoking Point, Staten Island, to keep a ferry "from his Landing place on the said Island a mile and a halfe along the sound or river to Low water wharf below his habitation and also a mile and a halfe along the Sound or River to Low water Wharff above his habitation." He was to operate his ferry to a place called Smoking Point in New Jersey, and his patent was to be in force for two years from the date when granted.¹

The ferry house is still standing in Rossville, which was once called Blazing Star, facing Arthur Kill Road, nearly opposite the present dismantling yard. As the letters patent were valid for only two years, it is not surprising to find that on April 23, 1730, Anthony Wright, of Staten Island, and one Joseph Fitz Randall (or Randolph), of East New Jersey, ferrymen, applied for a patent of an exclusive ferry from Smoking Point, Staten Island to Smoking Point, New Jersey.² Doubtless the petition was granted, probably for a long term of years, and the ferry on the Staten Island side appears to have been kept by Anthony Wright until his death in 1746.³ Then it would appear that his son, Anthony, was in charge until October, 1754, when Anthony Wright, Jr., offered to let his farm and ferry for a term of years at a public vendue on October 26. At the same time several sorts of household goods, hay, young cattle, and some hogs were to be sold.⁴

Perhaps the ferry was at that time taken over by Hezekiah Wright, a brother of Anthony Wright, Jr., and, in any event, on October 29, 1761, Hezekiah offered the ferry house and upwards of eighty acres of land to let for a long term of years.⁵ It is not known whether there was a lease but Hezekiah certainly remained the owner.

The month of January, 1768, was marked by bad weather. One New York newspaper dated the fourth of the month reported: "The Weather has been lately so unsuitable for travel-

ling or passing the Ferries, that we have had but one Post from Philadelphia for a Week past." "On the twenty-eighth a disaster befell a boat of the Blazing Star Ferry, of which the following contemporary account in a New York paper is the most extensive:

By a written Account from Richmond County, on Staten-Island, and by a Gentleman who brought it, and was himself a Share in the Calamity, we are acquainted with the following Scene of Distress viz:

On Thursday Night, the 28th January, between 7 and 8 o'clock the Weather extremely cold, and the Ground cover'd with Snow — the following Persons went from the Blazing Star, in New Jersey, to cross the Ferry to Staten Island, (the Wind being moderate and fair, and the Passage judged to be very safe) viz:

Mr. William Cornelius George, supposed to belong to Rhode Island; and Col. Kalb, a German Gentleman; both lately arrived at Philadelphia from London. Mr. Robert French, lately arrived at Philadelphia from St. Kitts. Mr. John Kidd, of Philadelphia, Merchant. John Thomson (who has a wooden leg) stage driver. William Bury, and a Lad, belonging to the Ferry, the Lad was lately Cabin Boy to a Ship from London to New-York, where he left the Ship, alledging that the Captain had misused him. A negro man belonging to Mr. Newry, of the Jersies, and a Negro Man, belonging to Mr. Provoost, of this City, in all 9 Persons and 4 Horses. As they were crossing the Ferry in a scow, a violent wind suddenly arose at N. W. whereby they were driven a considerable way down the River and ashore on a Mud Bank, where the Scow was half fill'd with Water; but as it was impractable to land at that Place, they were obliged to put off again, and in their efforts to gain the Land, broke two of their oars, and were soon driven ashore on a small Marsh Island, in the Mouth of the Fish-Kill Creek, about a half a Mile distant from the Ferry-House, where the Scow immediately fill'd, and the People and Horses were obliged to get out. The Mud was so soft, that the Men sunk in it to near the Upper part of the Thigh, and were not able to pull out their feet, without lying down on the water and Mud, and assisting with their Hands; but with great Difficulty they at last all got to the highest part of Marsh: The Poor lame Man was render'd more helpless, by breaking his wooden leg. Three horses not being able to disengage themselves from the Mud, stuck there and perished. The People on their small portion of Marsh, deep cover'd with Snow, had not the least Shelter from the Freezing blasts of the wind, nor could they make them-

selves be heard by the people on shore, the wind being against them. They had no other Recourse than to huddle as close together and give themselves as much Motion as possible. It was then about 9 o'clock, the Boy soon gave up and sunk down, but the Men took him up, shook him, and did all they could to exercise and heat him, but at about Eleven he expired. At one o'clock Mr. George, who had till then seem'd to bear up as well as any of them began to falter, and notwithstanding the best assistance his Fellow-Sufferers could give him he expired at about three o'clock, the Rest lived out the dreadful Night, and at last, almost quite spent and hopeless, at about Nine o'clock in the Morning were discover'd, and with Proper Help, for they had all nearly lost the use of their limbs, they were carried to Mr. Mersereau's and all possible care taken of them. Col. Kalb, after taking off his Boots immediately put his feet in cold water, where he held them near half an hour, during which time he took some Refreshments, and then went to bed and slept soundly till the afternoon: And he was the only person that Escaped without hurt. The Rest sat up around the Fire, and are terribly frost bitten, it is feared they will all lose their Toes, and that the Feet and Legs of some are in Danger; an Ear of one of the Negroes seems entirely perished. Mr. French, Mr. Kidd, John Thomson, William Bury, and the two Negroes when this Account came away, were at Mr. Mersereau's Ferry House, opposite to the Blazing Star, unable to travel. The two dead Bodies were carried to the same place for interment; the Coroner's Inquest having first sat on them. Mr. George (said to be a Man of good family and Fortune) was buried on Sunday last, with proper Solemnity. His effects are in the Hands of the Coroner, till claimed by his Friends. Col. Kalb, proceeded on his Journey, and arrived on Monday last. The Horses belonged to Mr. Mersereau.⁷

Mr. George was buried in the graveyard of St. Andrew's in Richmondtown, where his tombstone bears the following inscription: "Here Lyes Inter'd the Body of William Cornelias George a native of the Island of Jamaica he was educated & graduated Bachel^r, of Arts at Kings College New York & Yale College in New Haven he unhappily perished with the Cold endeavoring to cross a Ferry Jan:ry 29th 1768.

"Hark Mortals hark what voice what Solemn Sound
Comes echoing from within this hollow ground
O my dear friend be wise improve your Day
While vital Spirits animate your Clay."⁸

Some five years after the experience just described Hezekiah Wright decided to sell the "noted farm and ferry known by the name of the OLD BLAZING STAR, on the west side of Staten-Island, containing eight acres of good land," with a good house, barn, orchard, and mowing ground." It would seem that the property was acquired by Daniel Bassonett, who, in advertising that a mare had been left at his house by a person unknown, states that his dwelling was "at the Blazing Star."¹⁰

V. THE NEW BLAZING STAR FERRY

The New Blazing Star Ferry on the Staten Island side, about 200 feet west of the foot of the present Victory Boulevard, was perhaps founded in 1757 by Jacob Fitz Randolph.¹ At any rate the following advertisement appeared in March, 1761, in a New York paper: "To be Let. The Ferry on Staten Island, opposite to the new Blazing Star, now in the Tenure and Occupation of Eseck Fitz Randolph, whereon is a new Dwelling House, two Stories high, with 20 acres of Up-Land, and 10 acres of Salt Meadow. — Enquire of David Cannon, living near the Premises, or Henry Holland, at New York."²

There appears to be no evidence concerning the leasing of the property as a result of the above item, but before the end of June, 1764, the ferry was being operated by John Mersereau, born March, 2, 1732, the son of one Joshua Mersereau and Maria Corsen, daughter of Jacob Corsen, owner of one of the ferries on the north shore.³ As late as 1761 John is designated as a carpenter,⁴ but on June 28, 1764, he had the following notice published in a New York paper:

This is to inform the Publick that a well attended Ferry with good Boats is now established at the New-Blazing Star, on the nearest Road that leads from Woodbridge to New York, which Road falls into the old Post Road near the Dutch Church on Staten Island, at the Place commonly called Mudass's, at which place, there is a Ferry erected across to Bergen Point, to a Road that leads to Paulas's on the North River, opposite to the Old English Church in the City of New York — The Ferry at the New Blazing Star is kept on the Jersey Side, by Reuben Fitz Randolph, and on tre Staten Island Side, by John Mersereau; being about four Miles and a half



To the PUBLIC.

THE FLYING MACHINE, kept by John Mercereau, at the New-Blazing-Star-Ferry, near New-York, sets off from Powles Hook every Monday, Wednesday, and Friday Mornings, for Philadelphia, and performs the Journey in a Day and a Half, for the Summer Season, till the 1st of November; from that Time to go twice a Week till the first of May, when they again perform it three Times a Week. When the Stages go only twice a Week, they set off Mondays and Thursdays. The Waggon in Philadelphia set out from the Sign of the George, in Second-Street, the same Morning. The Passengers are desired to cross the Ferry the Evening before, as the Stages must set off early the next Morning. The Price for each Passenger is *Twenty Shillings*, Proc. and Goods as usual. Passengers going Part of the Way to pay in Proportion.

As the Proprietor has made such Improvements upon the Machines, one of which is in Imitation of a Coach, he hopes to merit the Favour of the Publick.

JOHN MERCEREAU.

John Mersereau's "Flying Machine"

Courtesy The New York Historical Society

from Woodbridge, and about five and a Quarter from the Ferry at the Dutch Church on Staten Island. Which last is kept by Bastian Ellis, who has good Boats provided for that Purpose, and a good attendance will be given, — From Ellis's Ferry to Paulas's Hook, is between eight and nine Miles. By making use of these Ferries on this Road, the dangerous Passage over New York Bay, together with the delay often occasioned by the wind and Tide, will be avoided. The Passage across the North River at Paulas's Hook, being little more than one mile."⁵

A few days later Mersereau advertised his ferry and the service of those cooperating with him. The short stretch between Mesier's Dock in New York City and "Powless's Hook" would

have a great advantage in winter because the crossing would rarely be obstructed by ice. The combination of ferries provided a "short, safe, easy and convenient Way" for all travelers passing to the City of New York from any of the Southern Governments.⁶

The next year Mersereau gave public notice that his stage would leave the ferry at Powles Hook every Wednesday and Saturday between seven and eight for Philadelphia by way of Woodbridge, Brunswick, Princetown, and Trenton and that travelers might depend on reaching Philadelphia in less than three days.⁷ By the spring of 1767 Mersereau was collaborating with John Barnhill of Philadelphia. They assured the public that they would keep the best of wagons and sober drivers. Their fare for each passenger was ten shillings from Powles Hook Ferry to Princeton and ten more to Philadelphia, with ferriage free. There were two wagons, with four sets of fresh horses, and persons might go from New York to Philadelphia and back in five days, having two nights and a day to spend in Philadelphia.⁸

On March 19, 1770, the ferry was offered for sale. The property consisted of a nine-room house, orchard, stables, garden, woods, and meadows, and Mersereau added: "The ferry is the best on the Island, and is much the shortest way from Philadelphia to New York, or from the Jersies to Long Island; and the House is much used by travellers, it being the Stage House . . ."⁹ No sale, however, was effected, and Mersereau continued to advertise his wagon, the "Flying Machine," for the trip between Powles Hook and Philadelphia and his rate of twenty shillings per passenger, and he claimed, moreover, to have made improvement on his vehicles.¹⁰

John Mersereau's brother, Joshua, in 1774 established a ferry across the Kill Van Kull, and John changed his route in such a way that he used his brother's ferry for the crossing of the stream, all of which led to the polemics between him and Isaac Decker, who had taken over the ferry previously owned by Anthony Waters. The arguments of Decker and John Mersereau will be discussed in the section of this paper devoted to Joshua Mersereau's ferry.¹¹

Before long, however, John Mersereau decided to dispose of his New Blazing Star Ferry, which he advertised early in January, 775, as for sale on reasonable terms. If it was not sold by January 20, it was then to be let.¹² There seems to be no

record of what transpired at that time.

A story has been told which probably concerns the New Blazing Star Ferry and Mersereau's coach. When on one occasion the ferry was coming over to Staten Island and carrying the stage, it is recounted that the two horses jumped overboard with the wagon. One horse was drowned, but the other, an exceedingly strong one named "Smoker," dragged the stage and the dead horse to shore.¹³

VI. THE FERRY TO ELIZABETHTOWN

On May 20, 1736, a petition addressed by Adoniah Schuyler to Governor George Clarke was placed before the council, which desired that Schuyler's proposed table of fees be laid before the board at its next meeting.¹ In the petition Schuyler maintained that there was a necessity for a ferry from the nearest part of Staten Island directly across the meadows to Elizabethtown Point in East Jersey. By this means the distance in the passage would be reduced to almost one eighth part and thereby the difficulty of passing the flats, which at some times of the tide were impassable, would be avoided. He added that travelers and others living in the vicinity had frequently applied to him for transportation for themselves, their horses, cattle, etc., and that he proposed to maintain and keep in constant repair good and sufficient boats for safe and speedy transportation. Such service would be of great advantage to the inhabitants of the places aforesaid, and others, if a constant, regular ferry were established with proper fees of ferriage. Schuyler, therefore, requested that he be granted a patent to keep such a ferry.² At the next meeting of the council the fees proposed by Schuyler were found "moderate," and it was advised that a patent be granted him.³

The distinguished naturalist, Peter Kalm, who on October 30, 1745, went from Elizabethtown to Staten Island on his way to New York, described this phase of his journey as follows: "Near the inn (in Elizabethtown) where we had passed the night, we were to cross a river, and were brought over, together with our horses, in a wretched, half-rotten ferry . . . The country was low on both sides of the river, and consisted of meadows."⁴

Schuyler operated his ferry for twenty-six years and built a causeway from it over the salt meadow to the upland. He died

in 1762.⁵ His farm, ferry, and the road from the sound to the upland of Staten Island were advertised in December, 1762, by the executors of his estate, John and Gertrude Schuyler, to be sold on March 28.⁶ It is not known whether the property was disposed of at that time or who purchased it or operated it thereafter. It may be noted that in February, 1771, the ferry house on the Jersey side at Elizabethtown Point, including the barn and ferry stairs, with an exclusive right to the ferry to Staten Island and to keep passage boats to New York, was advertised to be sold on March 1.⁷

(To be continued in the next issue)

FOOTNOTES

Section I

- ¹ J. E. Stillwell, *Historical and Genealogical Miscellany* (New York, 1903), I, p. 52.
- ² NY Colonial Mss. (in New York State Library, Albany) 54, p. 102.
- ³ Cited by Francis F. Wayland, "John Fontaine's Visits to Staten Island in 1716," *The Staten Island Historian*, XIII (1952), p. 2.
- ⁴ E. B. O'Callaghan, *Calendar of Historical Manuscripts* (Albany, Weed, Parsons and Co., 1866), Part II, English Manuscripts, p. 445. The original document was destroyed by fire in 1911. This work will henceforth be cited as *Cal. Eng. Mss.*
- ⁵ Ms. Minutes of Council (in the New York State Library in Albany), 62, p. 8.
- ⁶ Land Papers (in the New York State Library in Albany), 13, p. 22; Ms. Minutes of Council, 19, p. 57.
- ⁷ Ms. Minutes of Council, 19, p. 72.
- ⁸ *Ibid.*, 19, p. 68.
- ⁹ E. B. O'Callaghan, *op. cit.*, II, p. 537.
- ¹⁰ Ms. Minutes of Council, 19, pp. 57-58.
- ¹¹ *Ibid.*, 19, p. 40.
- ¹² Original patent, Museum Accession 2118, Staten Island Institute of Arts and Sciences.
- ¹³ *The New-York Weekly Post-Boy*, July 8, 1745.
- ¹⁴ *Ibid.*, Jan. 21, 1745.
- ¹⁵ *The New-York Mercury*, June 18, 1753.
- ¹⁶ Accession number 4123, Staten Island Institute of Arts and Sciences.
- ¹⁷ *The New-York Mercury*, March 1, 1756; *The New-York Gazette: or, the Weekly Post-Boy*, March 1, 1756.
- ¹⁸ *The New-York Gazette: or, the Weekly Post-Boy*, Sept. 22, 1755.
- ¹⁹ *Ibid.*, Jan. 17, 1757; July 18, 1757; May 1, 1758; March 3, 1760.
- ²⁰ *Ibid.*, Dec. 31, 1759.
- ²¹ *The New-York Packet*, July 11, 1763.
- ²² *The New-York Mercury*, Aug. 22, 1763. (The ferryman swam four miles to shore. Mrs. Henderton's name is also given as Hinderton. - *Pa. Gazette*, Aug. 25, 1763, p. 2 - and the same paper on Sept. 1, 1763, adds that her body had also been found).
- ²³ During the fall of 1762, according to *The New-York Gazette: or, the Weekly Post-Boy* of May 30, 1763, three ship anchors were lost "at the watering place, opposite Watson's Ferry." William T. Davis, "State Island Names," *Proceedings of the Natural Science Association of Staten Island*, V, no. 5 (March 14, 1896), p. 46, defines "Watering Place" as "the name of a large spring... near the bluff at the southerly end of the present railroad tunnel at Tompkinsville, where ships used to procure a supply of water before going to sea. The name was also applied to the vicinity of this well known spring."

- ²⁴ *The New-York Mercury*, Feb. 16, 1767.
- ²⁵ *The New-York Gazette: or, the Weekly Post-Boy*, April 18 and April 25, 1768.
- ²⁶ *The New-York Gazette: and the Weekly Mercury*, June 5, 1769.
- ²⁷ *The New-York Gazette: and the Weekly Mercury*, Feb. 13, 1775.
- ²⁸ *Ibid.*, Aug. 14, 1775.
- ²⁹ See (on the Cole family) Charles W. Leng and William T. Davis, *Staten Island and its People* (New York, Lewis Historical Publishing Co., Inc., 1930), II, pp. 683 and 873; Loring McMillen, "The Taylor and Skinner Map of 1781," *Proceedings of the Staten Island Institute of Arts and Sciences*, VII, Parts 1-2 (Oct., 1932-May, 1933), p. 6.
- ³⁰ *The New-York Gazette: and the Weekly Mercury*, June 9, 1777.

Section II

- ¹ NY Colonial Mss., 58, p. 53.
- ² Ms. Minutes of Council, 11, p. 154.
- ³ NY Colonial Mss., 58, pp. 50-51.
- ⁴ *Ibid.*, 58, p. 54.
- ⁵ *Ibid.*, 58, p. 110, and Land Papers, 5, p. 137.
- ⁶ Ms. Minutes of Council, 11, p. 170.
- ⁷ *The New-York Gazette: and the Weekly Mercury*, March 26, 1770.
- ⁸ *Ibid.*, March 3, 1777.

Section III

- ¹ Ira K. Morris, "The Old Hotels of Staten Island," *Proceedings of the Natural Science Association of Staten Island*, III, Special No. 14 (Sept., 1893), p. 3.
- ² John E. Stillwell, *op. cit.*, I, p. 53, cites a reference in 1709 to "Cap^{tn} Billopp's ferry."
- ³ See *Proceedings of the Staten Island Institute of Arts and Sciences*, I, p. 134. On Billopp see Leng and Davis, *op. cit.*, II, p. 864.
- ⁴ Ira K. Davis, *loc. cit.*
- ⁵ *The New-York Gazette*, July 4, 1737.
- ⁶ Leng and Davis, *op. cit.*, II, p. 864.
- ⁷ *The New-York Gazette: or, the Weekly Post-Boy*, Jan. 17, 1757; see the same newspaper of July 18, 1757; May 1, 1758; March 3, 1760, and Feb. 19, 1761, for similar references to Dote's; this newspaper on May 28, 1761, carried a notice of Richards, mentioning "Billopp's Ferry."
- ⁸ *The New-York Gazette: or, the Weekly Post-Boy*.
- ⁹ *The New-York Gazette: and the Weekly Mercury*, March 7, 1774.
- ¹⁰ Richmond County Deeds, Liber E, pp. 132-135 (in the office of the Clerk of Richmond County); Leng and Davis, *op. cit.*, II, p. 973.

Section IV

- ¹ See the ferry license in the possession of the Staten Island Institute of Arts and Sciences.
- ² E. B. O'Callaghan, *Cal. Eng. Mss.*, p. 506. The original manuscript was destroyed by fire in 1911.
- ³ Leng and Davis, *op. cit.*, II, pp. 976-977. His will was proved in 1746, and his heirs were his wife, Elizabeth; his sons, Hendrick, Hezekiah and Anthony; and four daughters.
- ⁴ *The New-York Gazette: or, the Weekly Post-Boy*, Oct. 21, 1754.
- ⁵ *Ibid.*, Oct. 29, 1761.
- ⁶ *Ibid.*, Jan. 4, 1768.
- ⁷ *The New-York Gazette: and the Weekly Mercury*, Feb. 8, 1768. Accounts of the incident are also found in *The New-York Journal, or, the General Advertiser*, Feb. 4, 1768, and in *The New-York Gazette: or, the Weekly Post-Boy* of Feb. 1 and Feb. 8, 1768. The item in the number of February 8 of the paper last men-

tioned closed thus: "Their being drove ashore on that Island, was owing chiefly to the breaking of the Oars of the Boat, by which they were exposed to the Mercy of the Wind, which was too violent to carry any Sail: A plain Indication that such Boats should always have extraordinary good Ones."

⁸ William T. Davis, Charles W. Leng, Royden Woodward Vosburgh, *The Church of St. Andrew* (Staten Island, William T. Davis, 1925), p. 190.

⁹ Wright inserted this advertisement in *The New-York Gazette: and the Weekly Mercury*, April 12, 1773, in which he mentions that he is "living near the premises."

¹⁰ *The New-York Gazette: and the Weekly Mercury*, Nov. 27, 1775.

Section V

¹ William H. Benedict, "Travel Across New Jersey in the 18th Century and later," *Proceedings of the New-Jersey Historical Society*, VII (1922), p. 109, n.1.

² (Weyman's) *The New-York Gazette*, March 2, 1761.

³ Ira K. Morris, *Memorial History of Staten Island* (West New Brighton, S. I., privately printed, 1900), II, p. 105.

⁴ *The New-York Gazette: or, the Weekly Post-Boy*, Jan. 2, 1761.

⁵ *Ibid.*, June 28, 1764.

⁶ *The New-York Mercury*, July 2, 1764.

⁷ *Ibid.*, March 11, 1765.

⁸ *The New-York Gazette: or, the Weekly Post-Boy*, May 28, 1767.

⁹ *Ibid.*, March 19, 1770.

¹⁰ *Ibid.*, May 18, 1772.

¹¹ See next instalment of this article in the issue for spring, 1953. The full details may be read in *The New-York Gazette: and the Weekly Mercury* of May 16, 30, June 6 and July 18, 1774.

¹² *The New-York Gazette: and the Weekly Mercury*, Jan. 23, 1775. The advertisement was also printed in *The New-York Journal, or General Advertiser*, Jan. 26, 1775, and *The New-York Gazette: or, the Weekly Post-Boy* of the same date.

¹³ "Anthon's Notes," *Proceedings of the Staten Island Institute of Arts and Sciences*, V (1927-1929), p. 143. On October 6, 1851, Charles Anthon heard the tale from a negro, Pompey Prall, who had it from the lips of Abraham Prall. It would seem that Anthon thought that the name of the horse might have given rise to the name of Smoking Point, which is quite impossible, as the point was so named as early as 1708.

Section VI

¹ Ms. Minutes of Council, 17, p. 97.

² Land Papers, 12, p. 18.

³ Ms. Minutes of Council, 17, p. 101.

⁴ Cited by Leng and Davis, *op. cit.*, II, p. 154.

⁵ Leng and Davis, *op. cit.*, II, p. 680.

⁶ (Weyman's) *The New-York Gazette*, Dec. 30, 1762.

⁷ *The New-York Gazette: and the Weekly Mercury*, Feb. 18, 1771; and *The New-York Journal: or, the General Advertiser*, Feb. 21, 1771.

PHOTOGRAPHING WILDLIFE ON STATEN ISLAND

BERNARD L. GLUCK

A dragonfly stops a moment to rest on a pond weed, and the morning sun glints off its glassy wings. A mourning-cloak butterfly lands close by, and as it slowly raises and lowers its wings, we see its color change from wine to purple and back to wine again. A sudden gust of wind tosses a milkweed pod and launches a dozen of its weightless paratroopers. These are the dramatic scenes in Nature that give us a lift.

But another summer is past. The birds have ceased nesting, and the insect world is quieting down. Gone is the sudden splash of the frogs as we stroll along the edge of the pond; deserted is its muddy bottom that a short while ago was vibrant with life. There is only a vague memory now of some of those magical moments in Nature that thrill us for a split second and then are over.

How can we capture some of these moments and preserve them to share with our friends? Can time be stopped and action frozen, magnified, and multiplied? Of course, it can — with photography! Where? Right here on Staten Island in its woodlands and marshes and parks, and in your own backyard. What can you photograph? Anything that interests you in the infinity that is Nature: birds that visit your feeding-shelf, or nest near by; butterflies that feed on the flowers in your garden; bees that come for the pollen; spiders that lie in wait for the bees, or the wasps that hunt the spiders. Your camera can be the window to a world of adventure, whether it be in the Lilliputian land of the insects or in the drama that takes place in almost any quiet pond.

You will find that by bringing your subjects indoors, you will have greater success because of the possibility of working under controlled conditions. Almost any Nature subject brought indoors naturally will require close-up photography, and consequently, certain types of equipment will prove more applicable than others.¹ Each new subject is a challenge, and will require a different approach or technique.

Most insects can be placed on a prop that is natural to them, such as a flower, rock, or stem, upon which they will remain long enough to be photographed. If they should fly off, indoors they can easily be recaptured and put back in the scene. Butterflies and other insects that are active during the day are best photographed at night when they are quietest, and conversely, nocturnal insects, such as moths, are easier to handle during the day. To photograph red slave-maker ants with captured black ant (*Formica fusca*) larvae and pupae in their jaws, I had to use a device consisting of two horizontal plates of glass spaced 1/8 inch apart. For a while the kidnapper dashed from corner to corner looking for an exit, but finally paused (probably to catch her breath) long enough to be photographed by open flash.

It is always interesting to photograph the life cycle of a species. For instance, the metamorphosis of a butterfly can be recorded from the caterpillar stage, through pupation, and final emergence as an adult. By keeping the caterpillar in a terrarium and supplying it with fresh leaves of the proper kind, you *may* be able to see its complete metamorphosis — that is, if it hasn't already been the victim of its natural parasites. I once had an experience that impressed me with the importance of parasites as a natural control of moths. One winter I collected about twenty-four cocoons from various places on Staten Island, expecting to have some fine specimens of moths to photograph. I placed them in separate jars and examined them from time to time to see if any had emerged. Well, from all the cocoons I had bottled, not one moth did I see, but a variety of parasitic wasps and flies made their way out of each cocoon. My efforts weren't entirely wasted, as I did get some interesting shots of the parasites.

But insects are not the only subjects on Staten Island for the adventurous nature photographer. The photography of wild birds requires more specialized equipment and plenty of time and *patience*. Here again, one can start on home grounds. If you have a feeding station in your garden, or a bird bath, you can set up your camera on a tripod about four feet away. Of course, the birds will not return with *you* there, so it is necessary to trip the shutter by remote control from the porch or inside the house at a window. I find the latter more comfortable in the winter.² This may sound like a tedious way of spending time, but actually it is most exciting to see a bird at long last cautiously approach



Wildlife on Staten Island

Baby Flicker
Painted Dragon-fly on Wild Iris

Adult Ant-lion
Whitefooted Mouse (Deer Mouse)

the feeding shelf. You hold your breath waiting for it to reach the spot on which you have prefocused the camera. You can't hold it any longer, and your heart pounds until you have pressed the switch, seen the flash go off, and frightened your subject away.

If you are like my wife Nita and myself, turning your house into a foundling home for birds, during the summer, you will have the opportunity to photograph the fledglings as they grow up. Then, when you turn them loose you will have a permanent reminder of the happy days when you hunted earthworms at night in the rain and removed the screens to let the insects fly in. One afternoon we got a call from Bob Mathewson (Curator of Science of the Staten Island Museum), asking if we would raise three flicker fledglings whose mother had died. Of course, we were delighted — and after a month, when all three could fly, we set them free at the lake in Moravian Cemetery, our favorite spot on Staten Island. But before the end of that month I had set up a stump (on the kitchen table) with some foliage around it and a white background. Our flicker babies are gone now, but we have their pictures with us permanently.

Quite often it is necessary to have an assistant to help you with your subject while you operate the camera. This was the case with the pretty little white-footed mouse pictured in this article. I captured "Whiskers" (as we named him) in a birch grove along Drumgoole Boulevard, in a small trap, using a piece of chocolate as bait. He was our guest in a large cage for several months through the winter. He was not at all co-operative about posing and did not like being exposed to view. To get his picture I prefocused on a rock outside. Nita positioned him on top of the rock under a small glass jar. At a signal from me she lifted the jar and I flashed my strobe unit before the mouse scurried into the grass. If mice communicate with each other, Whiskers certainly had some strange experiences to relate. And since Whiskers' time, Hoppy, Smoky, Sandy, and Buttons have given us additional mouse pictures.

After you get over the aversion to handling frogs, they too are a lot of fun to photograph. They are most co-operative, sitting motionless for long periods of time. The tall marsh grasses by Willowbrook Park are well populated with leopard frogs, and they will give you quite a chase. In the swampy woodland near by, you can find the far-jumping woodfrogs under

fallen logs. They are probably hiding from those pesky mosquitoes.

Whether it is the frogs, birds, insects, plants, trees, grasses or fungi that interest you, our island home has a rich abundance of them all. There are many paths of exploration open to any of us with the interest to travel them. If you take your camera with you, you will return with a permanent record of your adventures in Nature.

FOOTNOTES

¹ A tripod should be used at all times, and the type that has a central post that can be raised and lowered is the most useful. Cameras of the single lens reflex type such as Graflex, Exacta, and Praktiflex, or any cameras with ground glass focusing are best suited to close-up work. Cameras that cannot focus down to two or three feet can be used with the addition of a close-up attachment on the lens, such as the Kodak Porta lenses 1 plus, 2 plus and 3 plus for taking pictures at 20 to 30, 13 to 20, and 10 to 13 inches respectively. With cameras that cannot compose the picture directly on a ground glass but require the use of a viewfinder, the problem of parallax arises. Allowance must be made for the fact that the viewfinder sees an area which is above what the camera lens photographs. It is important also to use the smallest lens aperture possible to have the greatest depth of field. This requires a lot of light, which can best be obtained by using a flashbulb close to the subject. The ideal lighting, of course, is strobe flash. With strobe a picture will never be lost due to movement on the part of the subject. Shutters that do not come with strobe synchronization can have it installed by a competent repair shop at a cost ranging from \$8.00 to \$18.00. Non-synchronized cameras will work quite well using the gas-filled speed midget bulbs on open flash. These lamps have a speed of approximately 1/200 second. Photoflood lamps are not practical because they require long exposures and the subjects react unfavorably to the intense light and heat. All technical details should be attended to first. By having the lens focused and closed down, the shutter cocked, film loaded, and flash equipment all ready for the exposure, you can concentrate entirely on the subject.

² Here again I recommend using a flashbulb at the camera rather than natural light only. A flashbulb close to the subject is much brighter than sunlight and permits using a fast speed and small diaphragm stop. To trip the shutter instantaneously, I use an electric solenoid on the camera connected to 100 feet of extension wire. Three small dry cell batteries are used to operate the solenoid, and a push-button switch is at the end of the wire in my hand.

CHLAMYDOMONAS DYSOSMOS, MOEWUS, IN STATEN ISLAND

I. C. G. COOPER

In the fall of 1950 the author separated, by culture of a specimen of soil collected in Lanouette Park, a green alga of the genus *Chlamydomonas* having smaller cells than any of that genus he had previously found. That culture unfortunately died out. However, a sample of the soil had been sent to Dr. R. D. Northcraft at Amherst, Massachusetts, and a crude culture of the alga to Dr. Ralph A. Lewin at Yale.

Dr. Northcraft wrote that he had found the alga and considered that it exhibited sexual properties. Dr. Lewin isolated the alga in pure culture and found it to be regularly homothallic. He is now studying its life cycle.

The alga proved to be different from any previously reported in America. Dr. Lewin considers it to agree in morphology with one found by Moewus in Europe in 1931 and named by him *Chlamydomonas dysmos*. Moewus, in a personal communication to Dr. Lewin, stated that he had only maintained the species briefly in crude culture and no observations of the sexual reproduction were made.

This spring Dr. Lewin kindly sent a specimen of his pure culture on agar, and the following description of the structure of the alga has been developed by a study of that material.

Chlamydomonas dysmos has very small cells, individual ranging from 7μ to 10μ and breadth from 5μ to 5.5μ . The general shape and form is shown in Fig. 1. The cell wall is transparent, elliptical in outline, and from the anterior end extend two flagella with their fixed ends almost at right angles to each other. In cross section the cells are broad oval to circular. There is a bright green chloroplast lining the whole interior wall of the envelope with the exception of a small space at the base of the apex. Within the space inside of the chloroplast can be found at least one pyrenoid. This organ is believed to be involved in the process of building up starch granule food reserves which result from the presence of the chlorophyll and the action of photosynthesis when the cells are in light.

The flagella are very fine and are about as long as the body of the cell. When free and in fluid the cells are often very active. The flagella vibrate rapidly, and the cells move forward at times in straight paths and at other times rotate or pursue erratic directions. With careful lighting and magnification of 600 times the rapid beating of the flagella can be seen, more by reflection of light than by the image of their tissue, but they can be made visible in dead material by the use of stains.

Dr. Lewin has also found, with the electron microscope and photographic enlargement up to 60,000 times, that the exterior surface of the cell wall is marked with an extremely fine pattern of parallel lines.*



Chlamydomonas dysosmos
in Staten Island.
Magnification
about 5,000 times

The alga is known to reproduce vegetatively by division, and probably most of the multiplication in nature takes place in that manner. The cell contents divide within the envelope and eventually the daughter cells burst the envelope; but on agar media or in the soil they continue to lie side by side. Further divisions take place and a considerable amount of cells accumulate. In that state no flagella are visible, and the cells are irregular in shape and size due to mutual compression. When rain falls or moisture invades the colony in sufficient quantity, marginal cells rapidly produce flagella and swim off, becoming capable of copulation. It is this sexual phase which is now being studied. Small portions of the colony developed on agar are introduced into hanging drops of fluid congenial to the alga, and the consequent behavior of the cells are observed under a microscope.

The author is much indebted to Dr. Lewin for his contribution to our knowledge of this new American alga and for his kindness in reading the manuscript of this article. Further results of Dr. Lewin's studies are being awaited with interest.

*Lewin, Owen, and Melnick, *Experimental Cell Research*, Vol. II, No. 4, 1951.

INSTITUTE NOTES

SCIENCE

Two somewhat unusual discoveries on Staten Island were made by our members during the past summer. One was the Smooth Green Snake — *Opheodrys vernalis vernalis* — found in July by Robert Mathewson behind DeJonge's paper factory. This is the first specimen discovered on the Island for at least fifteen years, and it has always been questionable whether the previous ones might not have been introduced. Other specimens are now being sought, to ascertain whether this latest find is an accident or a stray, or actually an indigenous species.

The other discovery was a family of weasels. The New York weasel has not been seen in this area for many years, and it was a surprise to find a family comfortably at home in a wood-pile on Ocean Terrace near the top of Todt Hill.

A third discovery of interest was made on May 10th by the New York Shell Club, whose members, on a Staten Island field trip, found a large number of a species of land snail new to the city of New York, *Ventridens Ligera*, form *Stoni* (Pils). They were found in New Springville on the vacant farmland next to Freeman Winant swamp, and specimens were sent to Dr. Henry A. Pilsbry at the Smithsonian Institution for identification.

A stimulating feature of the work of the Nature Section is the requests from far and near for information or assistance. For instance, Allen Wechtel, studying at Columbia University, recently called for information concerning parasites of fishes. We have also responded to an inquiry from Carl H. Lindroth, Professor of Entomology, Zoological Institute of University Lund, Sweden, about Carabid beetles, particularly the type described by Howard A. Notman, formerly of Staten Island, from whom we received some time ago a large entomological collection.

What we believe will be a very useful addition to our natural history equipment has come to us* in the form of two hundred or more topographical maps. Most of these, prepared by the U. S. Geological Survey, are the familiar "quadrangles"

* Largely through the kindness of the Curator of Science himself.—Ed.

and "sheets" which cover seldom more than one county in any state, and usually only a portion of the county. These topographical maps have in the past proved very valuable to many of our Institute members in planning natural history expeditions, selecting roadways, and pin-pointing localities given in our natural science literature and exchanges.

New York State is now 90% covered in our collections by the recently accessioned maps. We wish we might say this of the other states, but we have very scanty coverage for the New England states — in fact, no maps at all for New Hampshire. We have also no maps of the midwestern states, Ohio, Kentucky, Indiana, Illinois, Iowa, and Wisconsin.

We make a plea to our readers. If you have any topographical maps of these states which you are not using, we would be very glad to add them to the collection. These maps are now filed according to state and quadrangle or sheet name, and a quadrangle map accompanies each state's maps. In New York state, the missing quadrangles are in the northernmost counties, the southwestern Catskill counties, and the western "southern tier" counties.

We are considerably indebted to Mr. Morris Jacobsen, President of the New York Shell Club, for valuable work during the past summer on the Institute's shell collection. He reclassified the local land and fresh water shells and made notes on the shells of all types collected by William T. Davis. He plans to write an article for this publication on Mr. Davis as a shell collector.

The indefatigable members of the Natural History Section have added another page to the record of breeding birds on Staten Island, which swells the valuable data of the National Audubon Society. The eleventh annual breeding bird count was taken during April, May, and June by four observers, Howard H. Cleaves, Lee A. Ellison, Casimir Redjives and Mathilde Weingartner.

Certain changes were noted. The filling-in of the Clay Pit Ponds in recent months may have eliminated two items from the customary list — the Pied-billed Grebe and Least Bittern.

These two birds formerly nested in that area, but during this census they were found neither there nor anywhere else on Staten Island. When the Purple Martins arrived to occupy the houses recently constructed for them by the Institute, Tree Swallows had already pre-empted them and would not admit the Martins.

However, 32 species were observed nesting on the Island, the list of which follows, as submitted by Miss Weingartner. More detailed records are available at the Institute.

Green Heron	White-breasted Nuthatch
American Bittern	House Wren
Mallard Duck	Long-billed Marsh Wren
Blue-winged Teal	Catbird
Wood Duck	Thrasher
Cooper's Hawk	Robin
Sparrow Hawk	Woodthrush
Pheasant	Bluebird
Virginia Rail	White-eyed Vireo
Piping Plover	Red-eyed Vireo
Killdeer	Blue-winged Warbler
Woodcock	Yellow Warbler
Spotted Sandpiper	Prairie Warbler
Rock Dove	Ovenbird
Mourning Dove	Yellowthroat
Yellow-billed Cuckoo	Yellow-breasted Chat
Black-billed Cuckoo	Redstart
Screech Owl	English Sparrow
Whip-poor-will	Meadowlark
Chimney Swift	Redwing
Hummingbird	Orchard Oriole
Kingfisher	Baltimore Oriole
Flicker	Purple Grackle
Downy Woodpecker	Cowbird
Kingbird	Scarlet Tanager
Crested Flycatcher	Cardinal
Alder Flycatcher	Rose-breasted Grosbeak
Wood Pewee	Indigo Bunting
Prairie Horned Lark	Towhee
Tree Swallow	Sharptailed Sparrow
Rough-winged Swallow	Seaside Sparrow
Barn Swallow	Chipping Sparrow
Blue Jay	Field Sparrow
Crow	Swamp Sparrow
Black-capped Chickadee	Song Sparrow

ROBERT MATHEWSON
LEE A. ELLISON

LIBRARY

During the year from May 1, 1951, to May 1, 1952, the Museum's library received more than two hundred calls for information from Staten Islanders not connected with the Museum. The inquiries ranged from the small boy who wanted to know how to make an atom bomb, to the novelist whose next book is set on the Island. We couldn't do much for the boy, but we did furnish the novelist with local papers of the period she was dealing with. She is kind enough to say that they were her main source for local history and color. We also found material for an artist who was illustrating a book on birds; several original documents for a genealogist; early basket-ball history for a sports-writer; an article on Staten Island serpentine for a geologist; and assorted facts for all the other inquirers. This is a rewarding task for the library, which glows with satisfaction every time it is able to produce an answer to a question.

Naturally, the library faces problems which also affect the entire Museum — lack of space for storage, for work, for consultation of material by visitors, etc. But one major library problem dwarfs the rest, and is steadily growing more acute — the preservation of our fine collection of local newspapers. We have more of these than any other institution, and — even more important — of some of these papers no other copy exists, so far as we can learn. If these are allowed to go to pieces, much of the record of our island's past will be forever lost. Some of the oldest, being printed on rag paper, are still in fair condition; but many of the later ones are crumbling so fast that some may not survive another handling. The only solution seems to be micro-filming, which is being rapidly adopted by almost all institutions having records to preserve. But micro-filming will cost more money than we now see any way of securing. The importance of these papers as a source for historians is definitely more than local, and we feel that foundations interested in preserving American records would be justified in supplying the necessary funds, which, though large for us, would be comparatively small to them. We have, therefore, applied to every foundation of which we have heard which might conceivably be interested, as well as to the great universities, libraries, and historical societies. The result has been an expression of concern, but no help.

The newspapers will not stop deteriorating while we work and worry. If only a few persons who appreciate their value would get together to create a fund, future generations of students of regional Americana certainly would rise up and call them blessed.

MABEL ABBOTT

BOOK REVIEWS

Trees for American Gardens. By Donald Wyman. (The Mac-Millan Co., New York, 1951. \$7.50).

Illustrated Guide to Trees and Shrubs. By Arthur Harmount Graves. (Published by the Author, Wallingford, Conn., 1952. \$4.00).

These books supplement each other. The *Guide* enables the reader to identify the trees he has seen and liked. Dr. Wyman's book supplies information about their habits, qualities, and uses. With the two in hand, home owners, professional landscape planters or architects, and nurserymen will be able easily to select a satisfactory tree for planting at any chosen site.

Dr. Wyman has been Horticulturist for Harvard University's Arnold Arboretum for fifteen years. The information assembled in this volume is really a summation of the accumulated data of that famous institution, the oldest arboretum in America. And to make the book continental in scope, Dr. Wyman has traveled extensively, adding data from other arboreta and botanic gardens throughout North America.

It is interesting to learn that of the 745 species and varieties of trees selected by Dr. Wyman as suitable for landscape planting in America, less than one half are native. A person who limits his studies to native sorts is poorly informed. Just consider: our human population came from all corners of the earth; our best citizens are often of foreign birth or extraction, and we welcome them for what they are worth in their new environment; we should do likewise in regard to exotic trees. Of the 745 sorts mentioned almost half are from China, Japan, and Korea, and only about one-sixth from Europe — perhaps because the climate of northeastern Asia is more like that of northeastern America, than that of Europe.

In the general list of recommended trees will be found brief descriptions with all essential information for evaluating a tree as a landscape object. The photographic illustrations are good. Both Latin and English names are given, together with ultimate height, hardiness, growth habit, blossom, foliage, and fruit characteristics, and something about history, adaptability, and faults.

In listing, without descriptions, 1600 other types of trees growing in American gardens, which in his opinion are usually inferior, Dr. Wyman has taken a bold and much-needed step forward for the benefit of the general public. For example, the Silver Maple is among the 1600 not recommended. The cost of maintaining (and removing) this variety in most northeastern cities is so great that often little money is left for planting and properly caring for more desirable street and park trees. Better maples are available.

Perhaps the most valuable section of the book for the home owner would be that devoted to "Trees for Various Purposes." The home owner starts out with a problem. He wants a tree for a wet spot, a dry spot, a smoky area, or perhaps as a replacement for a diseased elm. No matter what his tree selection problem is, he is likely to find in the very complete index, references to a list of several kinds that would serve the purpose.

Since the distinction between a large shrub and a small tree is difficult to make, and since both trees and shrubs are needed in most landscape plantings, we will slip in here a mention of Dr. Wyman's companion volume, "Shrubs and Vines for American Gardens." These two volumes, together with Dr. Arthur Harmount Graves' "Illustrated Guide to Trees and Shrubs," would make an ideal trio to start an arboricultural library.

Dr. Graves, through twenty-odd years of teaching botany in colleges and to teachers, students, and the visiting public at the Brooklyn Botanic Garden, has learned of the troubles of would-be botanists. One of the commonest ambitions of people who like beautiful surroundings is to know the names of the trees and shrubs about them. Once the names are known, they can find the other information in books and catalogs. But they hate to ask questions, and perhaps they don't know anybody who can tell them the right names anyway. Earnest students turn to books by experts, but too often the trouble does not end there. Some books

tell only about native and naturalized plants, omitting the many beautiful things commonly found in dooryards, along roadsides, and in parks. Books about gardening omit ornamental and useful wildings. Botanical manuals require a special vocabulary. A book with long descriptions is too big to carry around.

Dr. Graves has solved these problems. His new volume is small enough to carry afield, and it identifies all the trees, shrubs, and woody vines commonly found in the northeastern states, both wild and cultivated. The language is simple enough to satisfy almost anybody, yet the information is scientifically correct, and complete enough to be a boon to both advanced students and beginners. By means of simple keys and numerous pen-and-ink drawings he enables any observant person to run down an unknown woody plant quickly, without waiting for blossoms or fruit. Even deciduous trees in winter can be identified. The fine drawings are by Miss Maud Purdy, former staff artist of Brooklyn Botanic Garden. This one inexpensive, handy volume will enable the home-owner to wander in any direction from his doorstep, and without bothering anybody, to identify practically any woody plant he sees. Congratulations, Dr. Graves!

EDWIN RUNDLETT

Wild Life In Color. By Roger Tory Peterson. Houghton Mifflin Co., 1952. \$3.00).

For one who does not have the opportunity to travel to the country to study or observe nature, the next best thing is to go to the nearest book shop and get acquainted with "Wild Life in Color," by Roger Tory Peterson.

Mr. Peterson has accomplished a wonderful piece of work in bringing the American natural scene indoors to the armchair naturalist. He covers a wide range — birds, mammals, butterflies, reptiles, trees, flowers — and his simple, conversational style will appeal to all the innumerable varieties of nature lovers, from the backyard enthusiast to the seasoned observer.

His own love of nature colors the text all the way through. "Many men go through life as though they wore horse blinders, or were sleeping," he writes with exasperation. "Their eyes are open, yet they see nothing of their many wild neighbors. Their ears, attuned to motor cars and traffic, seldom detect the music

of nature — the singing of birds, frogs or crickets, or the wind in the leaves." His chapter-heads are provocative: *Flowers of the Low, Wet Places; Birds of the Bushy Places; Denizens of the Dry Country and the Desert*. Indeed, he covers every possible habitat of wildlife — water and land, mountains and deserts, and plains.

And he takes the opportunity to sound a conservationist's warning, pointing out that while the first settlers in this country found crystal streams teeming with fish, luxuriant forests, miles of grass, and wildlife everywhere, many of those rivers today run thick with mud, and streams that were anglers' paradises no longer are fit for fish to live in. He quotes statistics to show that two-thirds of our forest fires could be prevented; and he warns of the approaching extinction of a number of varieties of birds " . . . the loss of which would be a catastrophe to man himself Make no mistake," he says, "We must hold the line and take care of what we have Alone the individual can accomplish little. United and constant action can achieve conservation."

The book is profusely illustrated in color, containing 450 miniature pictures by many of America's leading wild-life artists. These are the pictures issued by the National Wildlife Federation as poster stamps. The volume should be in every library.

CASIMIR F. REDJIVES

Birds and Their Nests. By Olive L. Earle. (William Morrow and Company, Inc. 1952. \$2.00).

The home-life of animals is always of interest. In the case of birds, the need of warmth for the eggs is fundamental and has stimulated the development of most varied types of nest-building. Birds are unable to study their needs and pick the best solution; instead, their reactions are extremely stereotyped. That is why nests long abandoned are usually identified with ease. Crocodiles and other reptiles build nests, and ever since the first birds arose from reptilian forebears every generation has had to provide care for its eggs.

The simplest method is for the parents to squat on the eggs on bare ground or rock. From thereon, nearly every possibility has been exploited by some group of modern birds, as they

spread from Arctic to Antarctic. In this attractive little book, illustrated with her own drawings, Olive Earle tells of 42 selected species of birds, mostly North American, and the main facts of their nesting behavior and other ways of life. The illustrations show adult birds, their nests, and often their youngsters.

Nine exotic species are included because they nest in unusual ways, or, like the King Penguin, make no nest at all. The female of the Great Hornbill remains walled up in a hollow tree, and the Edible-nest Swift builds its saucer-shaped home of saliva! Our own Cowbird avoids nest-building by laying its eggs in nests of other species.

Miss Earle's choice of North American examples is a happy one. She includes species of such diverse appearance and behavior as the familiar Kildeer, Chipping Sparrow, Bobolink, Baltimore Oriole, Chimney Swift, Horned Owl, and Bald Eagle. They are not arranged in any technical sequence, but each bird story is attractively told and pictured. One may open the book at any page and read with pleasure and profit.

JAMES P. CHAPIN

Advanced Photography. By Andreas Feininger. (Prentice-Hall, Inc., 1952. \$7.50).

Almost anyone who has any real interest in photography may well profit from Feininger's ideas on its advancement as a medium of expression. The main theme of this book emphasizes the need of more insight into the use of the camera to produce real pictures, and the use of technique as a means to an end, not as an end in itself.

Feininger develops his main theme carefully and methodically, step by step, with side excursions into types of equipment, artistic control, experimentation, and a foundation of the pictorial elements. As one of the foremost exponents of a creative use of photography, he is well qualified to urge others to think for themselves, see for themselves, and make pictures that will keep the art of photography progressing instead of bogging down into a morass of repetitive mediocrity. While we may not all find ourselves in accord with each picture presented in the book as an example, generally speaking we cannot deny the need for progress from the stereotyped pictures now being made. Many amateurs

have felt the same urge to enlarge their scope of action. The urge to create something new is part and parcel of the photographer, and the reader of *Advanced Photography* cannot help but find new inspiration somewhere in its pages.

Experimentation, Observation, Imagination. These are the basic factors necessary to produce real photographs. These factors may be said to be important to art, or for that matter, to any field of endeavor. Without these, the photographer can hardly expect to produce much of real value. Technique, though necessary, is also a fit subject for experimentation and imagination. Feininger shows us some of the ways of varying the presentation of photographs to make their impact or feeling stronger. Equipment too comes in for its share of comment. Unorthodox use of standard equipment, and the imaginative use and creation of new or different equipment are discussed.

The obvious sincerity of the author, and the thoughtful method of presentation of his feelings and ideas, contribute greatly to the impact of the book upon the amateur photographer, upon whom the future of the art of photography is very largely dependent.

ELLIOTT L. CHAPIN

A Stamp Collector's Encyclopaedia. Compiled by R. J. Sutton. (Philosophical Library, Inc. 1952. \$3.75).

It has been estimated that there are between seven and ten million stamp collectors of all ages in the United States, and many more throughout the globe. Most of them collect stamps from all over the world. Most philatelists today who specialize in one country or even one issue of one country, originally started as general collectors.

Almost any of these enthusiasts will sometimes acquire stamps that they have difficulty in assigning to the proper country or place in their albums, because they do not understand the meaning of the overprints or cannot translate the many foreign words or phrases that appear as inscriptions. And most collectors do not own many books on their hobby aside from the indispensable catalog. This book has within its covers philatelic information not available anywhere else except in a well-equipped library. It is very comprehensive, with hundreds of illustrations and thousands of references, alphabetically arranged. From it any

collector, young or old, can interpret overprints, foreign phrases and inscriptions that have puzzled him. Furthermore, it gives dates of issues, estimates of user-population, monetary systems, etc. In short, we would call it a "must" for collectors.

ELLIOTT R. BURGHER

Golden Nature Guides. Herbert S. Zim, Editor. *Birds*, by Ira N. Gabrielson; *Flowers*, by Alexander C. Martin; *Insects*, by Clarence Cottam; *Stars*, by Robert Baker. (Simon & Schuster, New York, 1949-51. Cloth, \$1.50; laminated paper \$1.00).

In general, the Golden Guides to Birds, Flowers, Insects are excellent introductory material for children as well as for adults. They can be used profitably for identification and appreciation as low as the Fifth Grade, possibly by bright Fourth Graders. The color is true and clear; all three Guides have a fine integration with other areas of the child's interest and learning: viz., social studies (geography), the use of maps of the United States for habitat, range, migration, etc., and economic relationships.

The Flower Guide organization, based on color (clearly visible as small squares at the upper outer corner of each page) is excellent for the beginner, since botanical classification is the least important and interesting part of appreciation.

The Bird Guide is organized by scientific classification (pages 13-15), which in most cases is not apparent to the beginner. Therefore, whereas a bird may be less easily found and identified than a flower, it is still a simple matter for a child to flip the pages, looking for both color and shape (as well as consulting the map to see if the bird belongs in that particular section of the country at that time of year). The table on pages 128-149 is informative for the teacher, interested adult, or older child. The print here is quite fine.

The Insect Guide has been presented in as eye-catching and as palatable a form for the beginner as I have yet seen. Any repugnance to "bugs" should vanish. A study of the Insect Groups (pp. 15-16) is important, as it will save time otherwise lost by merely turning pages.

The Star Guide contains simple, clear information, well organized and clearly illustrated. Not only is it a guide to the

stars, constellations, planets, meteors, etc., of the night sky, but also a streamlined explanation of the causes and effects of the movements of the earth and other heavenly bodies — for example, day and night, seasons, color of the sky, tides. The use of the Big Dipper as a key to finding seasonal constellations (p. 61 ff.) is excellent. There is more meat, in simple language, on pages 138-139 ("Rocket to the Moon"), than in many more detailed works on the subject for the layman.

Recommended for the beginner, whether an adult or a child from the Fifth Grade up.

ELIZABETH N. SHARP

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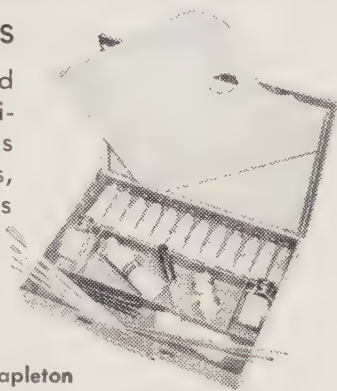
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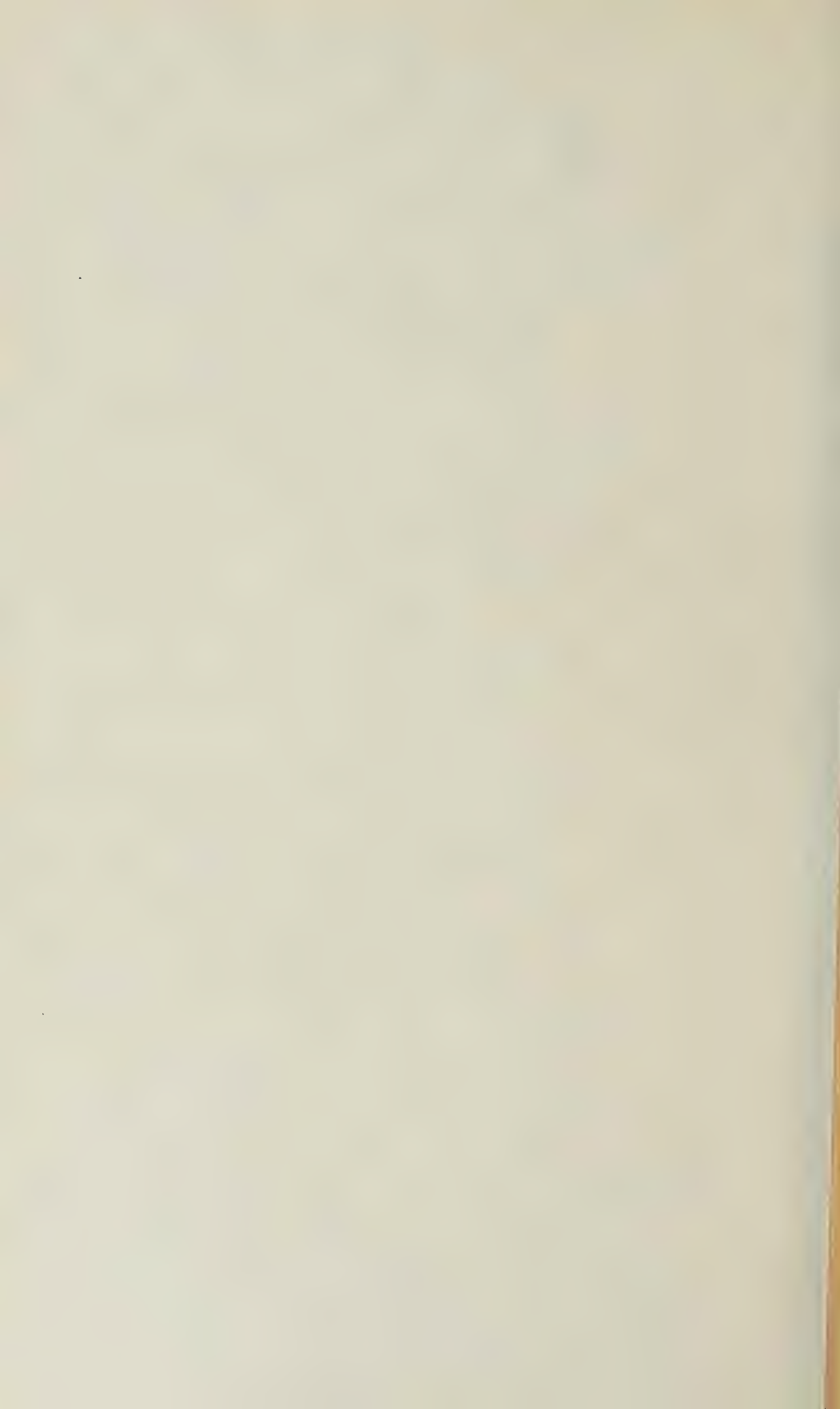
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Proceedings

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**STATEN ISLAND
INSTITUTE OF ARTS
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**Volume XV
Spring 1953
Number 1**

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OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES

Josephine S. Antonini, Editor

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PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES. Vol. XV, No. 1
Spring, 1953. Published semi-annually in spring and fall by the Staten Island Institute of
Arts and Sciences, 75 Stuyvesant Place, Staten Island, N. Y. Subscription price \$2.00 per
year included in annual membership fee of \$5.00. Josephine S. Antonini, Editor.



Howard Cleaves examining ducks and horned grebes killed by oil.

OIL MEANS DEATH TO DUCKS

HOWARD CLEAVES

On my first visit to California, in 1921, I looked forward with particular anticipation to seeing one place — the Rancho La Brea tar pits in Los Angeles. When I saw them my first reaction was disappointment. In a park-like area of mowed grass and manicured shrubbery were depressions which appeared like dried-up ponds, only a few yards in diameter, their bottoms black mud. But this black substance was not mud. It was tar.

In pre-historic times, animals now long extinct were trapped in the sticky tar and rendered as helpless as a gnat in fresh paint. In the storage cabinets of the Los Angeles Museum and other scientific institutions of California are many trays filled with the bones of rabbits, giant ground sloths, vultures, camels, wild horses, giant wolves, and elephant-like mammoths — all recovered from the Rancho La Brea tar pits.

Modern man, by his exploitation of earth's substance, and by his carelessness, has outdone Rancho La Brea ten thousand fold and more. When Europeans first explored North America they were at once impressed by the universal abundance of wild life, especially game species. Journals of missionaries and adventurers bristle with references to the "inexhaustible" numbers of ducks, geese, cranes, bison, pronghorns, prairie chickens, and passenger pigeons. Then *civilized* white men came to the North American continent, and the whole picture began to change. Forests were cut and burned, prairies were plowed, swamps and sloughs drained, rivers and bays polluted.

On the seas, sail was losing out to steam, but while the steam was generated by heat from coal, the incidental wastes did little harm to living things when cast overboard. But oil began to displace coal as fuel on ships and to be used more and more in our ever-increasing number of mechanical inventions.

And because the regions where crude oil is pumped from Mother Earth are often hundreds or thousands of miles from the great centers of population and industry where it is to be used, oil companies have built fleets of oil tankers, which now ply the oceans of the whole globe.

Spillage is bound to occur when millions of tons of fluid are carried from here to there all over the world. Since oil floats on water, a tragic destruction of wild life, especially bird life, occurs when oil from ships spreads out over the waters of oceans, bays, and harbors. Oil has a calming effect on rough water, forming areas of smoothness called slicks. Ducks, gulls, gannets, geese, dovebies, auks, murre, and other water birds, unaware that disaster lurks, alight on or swim into these slicks. If a bird fails to realize its peril and continues to expose itself to the oil film, its plumage soon becomes saturated with oil, and it is doomed to die as surely as were the saber-toothed tigers, the giant wolves, mammoths, and vultures at Rancho La Brea.

About 1938 the oil tanker *Frank H. Buck* was wrecked in the Golden Gate, the entrance to San Francisco Bay. The cargo of 65,000 barrels of crude oil polluted the waters and beaches for fifty-five miles up and down the coast, for at least fifteen miles off shore, and into numerous bays and lagoons. It was estimated that 6,600 California murre were killed by this one deluge of oil. American oil tankers torpedoed by German submarines during World War II near the Atlantic coast disgorged their crude oil cargoes, killing uncounted hosts of birds along the eastern seaboard. According to the *New York Times* of August 28, 1952, British investigators under the auspices of the Royal Society for the Protection of Birds and the British section of the International Committee for Bird Preservation state, "Waste oil from ships around the British coast now clogs and probably kills between 100,000 and 500,000 sea birds each year." As long ago as 1922 the British adopted the *Oil in Navigable Waters Act* which forbids discharge of oil in British territorial waters, but, the report adds, "it is doubtful whether the legislature reduced pollution by anything more than a negligible amount." The reason for this is not hard to find. Captains of oil tankers permit the bunkers of their ships to be flushed out and waste sludge to be pumped overboard as the ships are approaching port for refueling. Since investigations indicate that oil residues can float "far more than 500 miles from the point of origin," a captain might conform to the law by throwing overboard his oily bilge far beyond territorial waters, and yet cause distress to British bathers and death to British birds.

Staten Island waterfowl suffered severe losses from oil

saturation in late November and early December of 1951. An oil tanker went aground in New York Bay, and the cargo of crude oil was jettisoned to save her from sinking. The floating oil created waterfront fire hazards as it clung thickly to wharf pilings. Police and fire departments sent out warnings to tugboat men, dock and pier workers, but no warning could be given the thousands of ducks just returned from the north as they swam and fed in the Lower and Raritan bays. The National Audubon Society received a letter from a lady in Keyport, New Jersey, reporting that ducks were dying by the dozens there. On Staten Island, from South Beach to Ward's Point in Tottenville, the shores and all the debris strewn along them became sheathed in glistening black crude oil which shone like lacquer and clung like thick molasses.

Wild ducks and helldivers never previously observed close to shore were sitting on the beach endlessly plucking at their oil soaked feathers, trying to free themselves from the crippling slime. At Prince Bay I watched two horned grebes, an oldsquaw duck, a golden-eye or whistler, and a white-winged scoter — all upon the beach at Richmond Valley, many of them dead, others barely alive but too weak to escape or even move at my approach. These birds normally would be buoyantly floating on the water a hundred yards off shore and would swim farther out or fly on seeing a human being walking along the beach. And water birds are not the only sufferers. A Pleasant Plains boy found a killdeer plover so badly oiled that it could not fly. Killdeers feed on the tidal flats at low water in winter. This bird, without entering the water, had become oil-daubed by wading in shallow tide pools and was rendered flightless.

"Can't these oiled birds be dry-cleaned and liberated?" That is a question frequently asked, and the answer is *no*; for if the bird is badly impregnated the cleaning agent, whether naphtha, carbon tetrachloride, or some other oil solvent, will itself torture and kill the victim. There are reported cases of partially oiled birds which have been sponged off and saved, but not many. If a bird is not heavily oiled it may be agile enough to avoid capture, yet incapable of making the migratory flight. If it can succeed in feeding itself and survive until it molts the oiled plumage, it may regain a normal way of life. Five scaup ducks or bluebills and two or three red-breasted mergansers spent the summer of

1952 in the Great Kills boat basin instead of taking off for the north with their kind in the spring. The birds presented a misleading appearance because certain of their familiar features were obscured by discoloration. These ducks could not fly and appeared to experience discomfort if they remained too long in the water. They repeatedly hauled out on a section of floating log, the log itself being oil coated. The last bird attempting to get aboard would sometimes cause the log to roll, forcing all the others back into the water. These ducks could also be seen ashore, squatting on peat banks in a sequestered location little frequented by human beings.

We picked up almost a bushel of dead ducks and grebes on the beach at Richmond Valley in early December of 1951 when the oil from the grounded tanker had done its worst. Colored motion pictures were made to show the tragedy of it. To impress those who were to see these films I immersed a heavily oiled, dead horned grebe, or helldiver, in white gasoline poured into a white porcelain foot tub. After only two or three immersions the oil from the bird's plumage changed the gasoline from clear white to muddy black.

The problem of oil versus birds and other wild life has grown now to such proportions that attention is being given it by the United Nations, which proposes to refer the matter to the Inter-governmental Maritime Consultative Organization. Member governments have been asked to undertake research projects looking toward a solution, one such having already been made in England, that country claiming to contain not fewer than 250,000 "bird watchers" among its population. Dr. George Macaulay Trevelyan, 75, and until lately Master of Trinity College at Cambridge University in England, possessed of "one of the most tremendous minds to mature in Britain in this century" and a jealous lover of the green loveliness of his land, warns his country that unless its beauties are preserved against the defacements of modern life "the future of our race will be brutish and shorn of spiritual value." Modern men in every country might well take heed of this pronouncement, but we in the United States especially ought to respect the warning. We, who penetrated the secret of the atom, erected the tallest man-made buildings on earth, fabricated the biggest concrete dams to be found in any country; we who built the fastest ships to cruise the seas; we, Americans,

if possessing the courage to do so, must admit that year by year many of our spiritual values are being whittled away. Not only spiritual values are being dissipated, but material values as well. If it is not so, why is it costing over a hundred million dollars to restore the beauty and purity of a single small river, the Schuylkill, in eastern Pennsylvania? Great indeed are the engineering brains that conceived machinery and methods for coaxing oil out of the earth from fabulous depths. But where are the brains that will solve the problems created by other brains? Millions of hunters want to shoot ducks but, warns the Fish and Wild Life Service, the duck population is diminishing. Men crave more ducks, but other men are destroying ducks along our coasts by the thousands.

The reader may well ask, what is the solution? There may not be a complete answer to this problem, but some efforts have already been made to reduce the loss of waterfowl from oil saturation. The Coast Guard and the fish and game departments of states having ocean frontage are actively concerned, although handicapped by lack of funds to provide adequate inspection and investigation. If atomic energy displaces oil as a source of power, the ducks could no doubt float serenely in complete safety, but that day seems far away.

Because of the appalling destruction of bird life along the California coast, due to oil dumping from ships, a committee of ornithologists and others interested was formed some years ago. The late Dr. Barton Warren Everman of the California Academy of Sciences was a member of this committee. Even with such able leadership the committee was at first given no satisfaction by the big oil companies primarily responsible. Then, to quote Frances Houldson, writing in *Audubon Magazine* for March-April 1952, "One oil company hit upon a plan that would not only save the diving birds, but would also prevent the extravagance of wasted oil. The skippers were ordered to pump the ballast from the *bottom* of the tank (hold) instead of from the top as formerly, and to stop the pumps when the line of floating oil was reached. Shore tanks were installed and the balance — water heavy with oil — was pumped into these shore tanks and saved for further use by a settling process. All other companies quickly followed suit and built their own settling tanks in the Richmond hills."

Thus, through the urge to achieve increased profits for

corporations bird life has been salvaged on the west coast. But the executives of those corporations were first nudged by outsiders before making a move to correct an abominable situation. An aroused public opinion is a powerful force, and it is to help generate such a feeling of protest among more of our people on the east coast of the United States that I have set down this story of what happened when crude oil was spread on the waters surrounding Staten Island.

A PROGRAM FOR CONSERVATION

The devotion to the preservation of wildlife of Howard Cleaves, author of the foregoing article, should be an inspiration to all Staten Islanders, as well as to all Americans, for that matter. All his life he has been a leader among those who have carried on in the tradition of the Institute's founders — explaining the importance of conservation, adding bit by bit to our knowledge of wildlife, encouraging others to share in the pleasures of nature, and showing how even in a city like New York nature can be preserved and enjoyed.

The Institute wishes there were more people like Howard Cleaves, for it has begun an intensified program to persuade the public of the necessity for conservation, both locally and nationally. To the Institute, it is not just a matter of ducks and oil; it is a matter of public education. The loss of a few birds each year around New York City may be relatively unimportant in the larger picture; but public indifference to this is an indication of its indifference and lack of understanding on a much wider scale.

There is a job to do on Staten Island, not only for the sake of preserving nature here, but for the sake of showing why forest fires in the north, erosion in the south, or the draining of too many swamps and ponds in the west are important even to city dwellers right here in New York. As a beginning on this huge problem the Institute is doing several things: (1) A committee is working towards the establishment of a properly maintained wildlife sanctuary so that nature education on the spot (the only really effective kind) can be carried on year after year; (2) An attractive booklet on Staten Island wildlife, with text and illustrations by Olive L. Earle, prominent author of children's books, will be published by the Institute in the fall; (3) The Institute's first conference on conservation was held on May 16, 1953, under the title, "Conservation in an Urban Environment," with around 600 people in attendance at all sessions.

This conference was significant, and many of the papers presented were of more than passing value. In order that all our readers may share in these we plan to print in our issue for fall, 1953, a detailed account of the conference and at least two of the major speeches.

JAMES L. WHITEHEAD, *Director*

THE COLONIAL FERRIES OF STATEN ISLAND*

KENNETH SCOTT

VII. THE FERRY OF JOSHUA MERSEREAU

Joshua Mersereau, early in 1774, established a ferry across the Kill Van Kull near the spot where Morningstar Road now reaches the Kill. His brother, John, proprietor of the New Blazing Star Ferry and one of the owners of the stage from Powles Hook, had been using the ferry across the Kill which had been previously kept by Bastian Ellis, then by Waters, and next by Isaac Decker, who owned it in 1774. John Mersereau, on or before May 16, 1774, quitted the old stage road and ferry and began taking his stage across the Kill Van Kull on Joshua's ferry, all this, according to Isaac Decker, "merely for the interest of his brother."¹ Joshua, incidentally, proclaimed on his handboard that it was nine and one quarter miles from there to New York, though Decker contested that the distance was nearly ten.²

John Mersereau claimed that his reasons for using the new ferry across the Kill Van Kull "were not merely for the interest of his brother but were, 1st. because of the distance from Woodbridge to Poweles Hook crossing at said Ferry, is shortened at least one mile. 2nd. Because the Road from the said New Ferry, along Newark Bay, from Bergen point, is much better than the old Road through Bergen Woods, the former being high and dry at all times, and very pleasant; the latter being very low and generally wet, miry, and unpleasant in travelling, of which the subscriber hath sustained damages by the wear and breaking of his carriages, at least to the value of 100[£] more than he probably would if he had used the other Road."³

Decker thereupon countered with the assertion that the difference in distance between the new and old roads was scarcely a quarter of a mile, and that even two miles of road would not make up for difference between the two ferries in their width, safety and easiness to cross. In addition, he stated that the new

*Continued from the issue for fall, 1952. Reference map facing page 45 in that issue.

road was very heavy, hilly, sandy, and at least 25 or 26 wooden bridges in it that it is enough to kill either man or horse that travels it."⁴ The quarrel in the press concluded with a claim by Mersereau that Decker's conveyance from New York to Philadelphia was more expensive than his own and with Mersereau's publication of an affidavit by Peter Housman, a surveyor, that the difference between the old and new roads was much more than a quarter of a mile.⁵

VIII. THE CORSEN FERRY TO BERGEN

A petition was placed before the governor's council on September 15, 1750, in which Jacob Corssen stated that he had been a freeholder and inhabitant on the north side of Staten Island for almost sixty years and during that time had constantly kept a ferry between Staten Island and Bergen directly opposite to the land where he dwelt. He had provided "a proper Ferry Boat, Canoes and other Utensils" and was attending it "with a sufficient number of able and skilful servants." He also ferried to New York City and elsewhere and frequently accommodated travellers in his home without keeping any public ferry house or tavern. He contended that if other ferries were built there it would hereafter be more and more hurtful as the country filled with people and he therefore prayed for letters patent to erect his ferry into a public ferry and for a grant of the soil between high and low water mark fronting his own land and also all other vacant and unpatented ground between high and low water mark within a mile and a half on each side of his own land.¹ The council advised that the patent to keep a public ferry be granted him, with, however, a grant only of the soil between high and low water mark fronting the property where the petitioner then dwelt.²

Some two years before, on March 15, 1748, in a petition then presented to the governor by Otto Van Tuyl, John Beck, Bastian Ellis, Jacob Corssen and others, it had been stated that Beck and Corssen had procured boats, and for some years past had carried passengers from their lands to New York City and to the opposite shore of New Jersey, and also that Beck had built a dock.³ It seems probable that Corssen, after securing his patent, conducted his public ferry for some years, very likely until 175



Enlarged section of *A South Prospect of Ye Flourishing City of New York in the Province of New York in America* (the Bakewell view or reissue of the Burghis View, 1717-46). Note the flat type of ferry, propelled by oar and sail, most commonly used in the early 18th century. Courtesy of The New-York Historical Society.

or later,⁴ and that the ferry was then acquired by John Beck, who in 1764 advertised it for sale and described the premises as having a "noted tavern call Modus and a fine dock into the Kill Van Cull."⁵

The purchaser, in all probability, was Anthony Whitehead Waters, though for a time, at least, Bastian Ellis was in charge, for in 1764 John Mersereau advertised his New Blazing Star Ferry as being "on the nearest Road that leads from Woodbridge to New York, which Road falls into the old Post Road near the Dutch Church on Staten Island, at the Place commonly called Mudass's, at which place, there is a Ferry erected across to Bergen Point, to a Road that leads to Paulas's on the North River." He also stated that his New Blazing Star Ferry was about five and a quarter miles "from the Ferry at the Dutch Church on Staten Island; Which last is kept by Bastian Ellis, who has good Boats

provided for that Purpose, and a good attendance will be given — From Ellis's Ferry to Paulas's Hook, is between eight and nine Miles."⁶

That Ellis' ferry was previously kept by John Beck is shown by another advertisement of John Mersereau which appeared a few days later. This notice, after dealing with the New Blazing Star Ferry, added: "... a Ferry is established, and kept a-cross the Kill Van Kull, and ... Boats constantly attend for that Purpose, at the Place formerly belonging to John Beck, and commonly called the Moodases, situate near the Dutch Church, on Staten-Island, from whence Passengers are transported directly across to Bergen Point, from which Place there is a fine Road leading directly ... to Powless's Hook."⁷

It should be noted that Ellis is mentioned as keeping the ferry, but the owner was probably Anthony Whitehead Waters,⁸ and in all likelihood Ellis managed the ferry for only a short time before Waters took up residence there. Perhaps Waters was in charge — and he was obviously the owner — when at the beginning of December, 1767, the disaster overtook one of his ferries which is related as follows by a New York newspaper: "Yesterday Sen'night, a melancholy Accident Happen'd at Anthony Water's Ferry from Staten Island to Bergen: A Flaw of Wind took the Scow as it was passing over with the Stage-Waggon on it, and overset her about ten Yards from the Shore, by which Means two Women, who are said to be Mrs. Morris and her Maid, belonging to the Play-House, were unfortunately drowned; The two Horses that were fast to the Waggon likewise drowned; — The rest of the Passengers and the Boatman saved themselves by getting on the Bottom of the Scow; and the Waggoner swam on Shore."⁹ Mrs. Morris' husband was then playing King Henry in *Richard the Third* at the old playhouse on John Street in New York.¹⁰

Before the middle of September, 1771, Anthony Waters had died, and his personal effects were to be sold on September 24.¹¹ It was announced early in January, 1772, that on March 3 the 200 acre farm of the deceased Anthony W. Waters would be sold. On the premises there were "an elegant two story Dwelling House, Barn, Stable, and Orchard, likewise to be sold, half the House and Wharff adjoining, lately occupied by Anthony Waters Ju. deceased" and also "all conveniences ... for carrying on a

Ferry to Bergen-Point."¹²

For a short time the ferry service apparently lapsed but on May 16, 1774, the following advertisement was printed:

This may serve to inform the public, That the house on the north side of Staten-Island, late the property of Anthony W. Waters, deceased, is again opened as a tavern, and kept by Isaac Decker, at the sign of the King's arms, who has provided two good boats to ply between said place and New-York, in order to carry passengers; also a six oar barge that will go on any emergency in case of a calm; He also keeps a ferry across Kill Van Kull to Bergen, in order to oblige such gentlemen and ladies as choose to go by way of Powles-Hook. There is a new convenient wharf erected where horses and carriages may be landed or taken on board at any time with the greatest safety; it is needless to say anything as to the House or its situation, as it is beyond dispute, equal if not superior to any other in that way of business between Boston and South Carolina, but as all New Undertakings are attended with great difficulty, trouble and expence, he earnestly begs the public's patronage and favour, and that they may rest assured that he will not deceive them by promising more than he means to perform; he will only say, that he is determined to keep the best of liquors, eatables and lodgings, and will endeavour to mend whatever may be found fault with; and as John Mersereau, one of the proprietors of the stage that drives from Powles Hook to Philadelphia, hath quitted the old stage Road and ferry, and now crosses the Kill at a new ferry erected by his brother Joshua Mersereau, Esq; (not through any fault that could be alledged against the Roads house and ferry, or the attendance given, but merely for the interest of his brother) it is the determined resolution of the proprietors of this place, to erect a new stage coach and waggon, to drive from this ferry to Philadelphia. Twice in a week all gentlemen and ladies who choose to travel this way, may be brought from New-York, the evening before the stages set out, in the boats by able and skillful boatmen, and in place of being disturbed of their usual Rest by being obliged to leave their beds at three or four o'clock in the morning, they may rest until seven or eight, have time to breakfast, and still more forward on their journey than those who come by Powles Hook. All gentlemen and ladies from the interior parts of the county, who choose to spend some time in the heat of summer near the water, may be accommodated with elegant rooms, that command an extensive and agreeable prospect from

their windows: They may also be supplied with everything that the market of New-York affords; and all kinds of shell and other fish usually met with in this country, may be taken before the door; the stables which he has is not inferior to any public or private in America, where the best hay and oats will be provided and all gentlemen and ladies may find it most convenient by taking a passage in the boat and leaving their horses and carriages, may depend upon the very best of usage. The public will also be pleased to observe, that the passage from New-York to this house is commonly, made in the general way between one and two hours, and very often in less time, whoever will compare the list of Roads in the almanack, will find they shall shorten the way to Philadelphia ten or twelve miles by coming this way, rather than by the way of Powles-Hook and Newark, and at a considerable less expence, but as the public will in short time be able to judge with certainty which of the Roads ferries and taverns will be most convenient, it would be needless to say more than that all favours conferred will be gratefully acknowledged by the public's most obedient, devoted and humble servant, Isaac Decker."¹³

The polemics to which the above advertisement led are discussed at some length in the chapter concerned with Joshua Mersereau's ferry. In conclusion it may be noted that Decker was an ardent Tory and that during the Revolution his ferry on the north shore and that of Cole on the east shore were the only ferries recognized by the British military authorities in their proclamations.¹⁴

IX. THE VAN TUYL FERRY

Otto Van Tuyl married Greetje Dircx in the Dutch Church in New York in 1693,¹ and some years later found himself in difficulties because he had been accused of piracy.² According to the minutes of the governor's council, which as regards this item are partially destroyed, he appeared before that body on June 14, 1699, and informed the lieutenant governor that he had lately arrived in New York in the ship "Nassau Giles Shelly Master from St Maries in the East Indies, to which place he went about four years ago in the ship John and Rebe (. . .) Captain John Hoare Master."³ A certain man named Buckmaster and Otto Van Tuyl had been members of Captain Kidd's crew, and when they were seized, along with Giles Shelly, by the authorities

in New York, their attorney, Nicolls, moved at a meeting of the Supreme Court held on the afternoon of October 7, 1699, that a habeas corpus be granted for the sheriff to bring the prisoners into court that it might be determined whether they were bailable or whether they ought to be discharged. Van Tuyl was admitted to bail and the cases were apparantly dropped, so that the governor, the Earl of Bellomont, complained: "Piracy does and will prevail in the province of N. York, unless three things be done out of hand: — good Judges and an honest, able Attorney General from England . . . Capt. Giles Shelley has so flushed 'em at N. York with Arabian gold and E. India goods, that they set the Government at defiance."⁴

This same Otto Van Tuyl, a half century later, in January, 1749, stated that he had erected a wharf, to which a road had been built, and was engaged in ferrying to New York.⁵ Although, in spite of Van Tuyl's protests, his neighbor, Solomon Comes, had secured a patent restraining anyone from keeping a ferry, during the twenty-one year term of the patent, for one mile to the westward of Comes' land, Van Tuyl refused to acquiesce and asserted he would ferry as long as he had life.⁶ His quarrel with Comes and his intemperate language, which brought him before the Supreme Court, will be discussed later, but at this point it will suffice to point out that by some means, possibly through an agreement with Comes, Van Tuyl continued to operate his ferry, which must have been located on the Kill Van Kull near the foot of what is now Jersey Street. On October 20, 1755, he advertised that he continued to keep his ferry on Staten Island, in company with Abraham Bockee at the Whitehall Slip in New York, and that he and his partner had three boats for the purpose.⁷

The next year disaster befell a ferry boat, probably one of those belonging to Otto Van Tuyl, for the boatman was Dennis (or Denyse) Van Tuyl. The incident, as given in two different newspaper accounts, both of March 15, 1756,⁸ is as follows:

The preceding Thursday at about twelve o'clock one of the ferry boats from Staten Island was coming over the bay with thirteen men and three horses on board. The wind was blowing fresh and there was a high sea, when the boat gave a sudden pitch and the horses fell astern, so that they shipped so much water that the craft sank a few minutes after between Bedlow's and Oyster Island. As the accident took place on the edge of the

Flats, about three feet of the boat's mast continued above water, to which several of the men clung for a considerable time. When the accident was observed from New York, two boats put out at once and, although they were upwards of four miles distant, managed to reach the scene in time to save two of the men; the others, quite spent with cold and wet, had not been able to hold out, and those who were picked up were almost ready to drop.

The two persons rescued were Captain Benjamin Williams, battoeman, and Nathaniel Douglass, one of his men. Those drowned were Captain Thomas Alson, of Raway, New Jersey; Thomas Harrison, Israel Rose, Daniel Fling and James Jones (all four battoemen under Captain Williams); William Small Pierce, a soldier belonging to General Shirley's regiment; one Moore of Piscataway, New Jersey; Dennis (or Denyse) Van Tuyl, the boatmen; three gentlemen strangers, whose names were unknown. The horses, also, were drowned.

In the boat was a chest containing items belonging to Captain Williams and his men. It was believed that this might float and be found on some shores near at hand, so that a handsome reward was promised to anyone who should take the chest to Daniel Knap, tavernkeeper, in New York.

The names of the three gentleman strangers who had perished were later discovered, for a New York paper of March 22, 1756, reported:

Monday morning last was taken up on the Jersey Shore, and brought into the White Hall Slip, the Ferry-Boat in which the melancholy Accident happened the Thursday before in our Bay. Daniel Fling, one of the Battoe-Men drowned, was found in the Boat, and soon after buried, and the Saddle-Bags that were still in the Fore-Castle, discovered that the three strangers, mentioned in our last to be likewise drowned, were, William Lawrence, of Raway; and John and William Miller, of Setauket, on Long-Island.⁹

In 1757 Joseph Richards advertised that his stage would go from Doty's to various ferries, including Van Tuyl's,¹⁰ and on June 20, 1757, Van Tuyl had a notice inserted in a New York paper to the effect that there had been left on board one of his ferry boats "a Bundle of Things ty'd up in Speckled Linnen, several Things of Value," and that whoever could describe them

might have them "at the House of Otto Van Tuyl, living at the Ferry."¹¹

It may be assumed that Van Tuyl died about January or February, 1760, for on February 25, 1760, his partner, Abraham Bookee, at the Whitehall Slip in New York, offered for sale "A Convenient Boat, about 27 feet Keel straight, very fit for carrying Passengers, Horses, Chairs or Oxen; as also a Grant of Privilege to Land or take off any Thing from the Wharffs or Landing Places, on the Places of Messers Otto Van Tuyl and Solomon Comes, of Staten Island, deceased."¹² On March 31, 1760, Jacob Corsen, Cornelius Corsen and Benjamin Seaman, executors, advertised for sale by vendue on April 7 "At the House of Otto Van Tuyl, late of the County of Richmond, Deceased, Cattle, Horses, Hogs, Household Goods, and Farmers Utensils, Boats with their Tacklings; Likewise a Parcel of Negroes, Men, Women, Children."¹³

Van Tuyl's Ferry was next operated by Major William Douglass, and it was referred to as "Douglass' ferry."¹⁴ When John Watson offered the Upper Ferry at the Narrows for sale at auction on March 22, 1768,¹⁵ it was purchased by Douglass, who on April 18, 1768, advertised the Upper Ferry for rent.¹⁶ Almost a year later no one apparently leased the Upper Ferry and Douglass caused the following advertisement to be published:

To be Let, for a term of one, two, or three years, as may best suit the lessee, the farm, ferry, and real estate of the late Otto Van Tuyl deceased, which now is, and for some time past has been in the tenure of William Douglas, he having lately purchased the ferry of John Watson, where he proposes to remove, unless it may best suit the lessee to rent the last mentioned ferry; which shall be at his option. Both of the said ferries from their long standing, are so well known as to make it unnecessary to describe them: The first contains between 160 and 200 Acres; the latter 20, both very good land. Any person inclining to lease, may apply to William Douglass, living on the premises, or to Jacob Corsen, Cornelius Corsen, or Benjamin Seaman, executors to Otto Van Tuyl.¹⁷

Very soon thereafter, at least before June 5, 1769, Douglass had decided not to move and instead had sold or leased the Upper Ferry near the Watering Place, for one Darby Doyle was by that date in residence "at the Place where John Watson lately

lived," and was also running the ferry from Staten Island to Whitehall in New York.¹⁸ It was not long, however, before Douglass also decided to dispose of his goods and lease the ferry previously owned by Van Tuyl, for in February, 1770, he advertised for sale on March 26 at the ferry house on the north side of Staten Island where he was then living his horses, sheep, cattle, farming utensils, beds, bedding, and sundry other household goods; also a negro who was an excellent hostler or oarman in a ferryboat, and a wench who was a good cook and washed and ironed well; likewise three good boats, two open stern sheets for horse boats and the other quarterdecked, fit for any freights.¹⁹

A little later he announced the forthcoming sale by public vendue on April 26 of a negro boy about sixteen years old, an "exceedingly handy boy," who had the smallpox and measles and was of an excellent constitution, and also a negro wench about 27 years old; also two good riding chairs, two good ferry boats, a wagon and horses, with a considerable quantity of household goods. The same advertisement stated that the place was to be let for a ferry tavern and farm, and that the lessee could have immediate possession to work on it.²⁰

It may safely be assumed that Douglass left after the sale of his household goods on April 26 and that the ferry service was then discontinued, for in February, 1773, the place was advertised for rent on May 1. The notice stated that James Arnot was living there and that "it is very convenient for a tavern or ferry as there was formerly one been kept."²¹ The next tenant was John Wandell, who was living there on October 10, 1774, when the property, described as formerly that of Otto Van Tuyl, deceased, from which a ferry had long been established to New York, was offered for sale. Prospective purchasers were to apply to Peter Barberie in Perth Amboy or to Van Tuyl and Varick, near the Royal Exchange, in New York.²² Apparently the Van Tuyl ferry had ceased operation after the departure of William Douglass.

X. THE COMES' FERRY

Jacob De Hart of Richmond County, mariner, late in the year 1747 presented to the governor a petition in which he set forth that he had lately purchased a considerable plantation on

the north side of Staten Island. There he had built a dock in the river for "conveniency of Landing and taking on Board, transporting and Carrying Passengers, Horses, Carriages and Goods" from Staten Island to New York. Further he had bought two boats for that purpose and requested letters patent to erect the same as a public ferry and granting him all ground between high and low water mark whereon the dock was built, as also all vacant and unpatented ground between high and low water mark "from the said dock, being the Northeast part of Staten Island, to the petitioner's Meadows lying on the Northwest side of said Island, with full power Liberty and priviledge to Erect and set up any other or more Ferry or Ferrys, on the said North side of Staten Island, for the transporting and Carrying Passengers, Horses, and Goods, from Staten Island to New York, as also from Staten Island to any part of Bergen County in the Province of New Jersey."¹

A caveat was promptly entered by Otto Van Tuyl in behalf of himself and other freeholders on the north side of Richmond County adjoining the Kill Van Kull against granting to De Hart, pursuant to his petition, any lands between high and low water mark adjoining to their lands bordering on the Kill and against granting a patent for a ferry from or between high and low water mark adjoining or between their lands and the Kill until the parties were heard.²

Van Tuyl likewise presented a petition, together with John Beck, Bastian Ellis, Jacob Corsen and others, protesting against the "unreasonableness and extravagancy" of De Hart's request for rights to land for six or seven miles along the Kill. The document pointed out that Beck and Corsen had procured boats and for some years past had carried passengers from their lands to New York City and to the opposite shore of New Jersey, as also that Beck had built a dock. The petitioners therefore asked that De Hart be granted only lands between high and low water mark facing his own property.³ Both the caveat and petition were laid before the governor's council on March 15, 1748, and were ordered referred to the same committee to which De Hart's petition had been referred.⁴

Before any decision was reached in the matter, one Solomon Comes acquired De Hart's property, for on September 30, 1748, a caveat was entered by Otto Van Tuyl against granting

anyone a patent for establishing and keeping a ferry or ferries from or to or fronting the land in his possession "lying on the North side of Staten Island bounded on the East side by lands now in the possession of Solomon Comes and on the South side by lands now in the possession of Cornelius Corsen and bounded on the West by Lands of Abraham Van Tuyl." This caveat against granting a patent for a ferry also was against the grant of a patent of soil between high and low water mark fronting lands in the hands of Otto Van Tuyl until the case could be heard by the council.⁵

Otto Van Tuyl's apprehensions were thoroughly justified, for on November 2, 1748, Solomon Comes presented a petition to Governor Clinton. Therein he stated that he had lately purchased from Jacob De Hart a plantation on the northeast side of Staten Island, whereon a dock was built in the river for the conveniency of landing, taking on board, transporting and carrying passengers etc. from Staten Island to New York. The petitioner set forth that for this purpose he had purchased two good boats and had built a large addition to his house, with stables and outhouses. He had, he added, entertained the Philadelphia Post Rider and his horse and transported him gratis to and from New York. Further he had hoped to enjoy all this but another person had erected a ferry above his and tried to hurt him, Comes, as much as possible. The petitioner therefore asked a patent to erect his ferry into a public ferry, with the grant of ground between high and low water mark where his dock was built and also all other such vacant and unpatented land within a mile of each side of of his dock and ferry.⁶

Comes' petition and the aforementioned caveat of Van Tuyl were read in the council on December 7, 1748, and it was ordered that Comes serve a copy of his petition on Van Tuyl and also show a copy to the other proprietors of the lands fronting the soil between high and low water mark for which Comes was seeking a patent. Comes was likewise ordered to acquaint the same proprietors that a copy of his petition had been delivered to Van Tuyl. All parties desiring to be heard for or against Comes' petition were commanded to attend the council on Thursday, January 12, between ten in the morning and noon.⁷

Van Tuyl then drew up a petition signed by some fifty-seven persons, including John Beck, Jacob Corsen and Silvanus

Seamans. These petitioners expressed no objection to the granting to Comes of the privilege of a public ferry from his own lands between high and low water mark directly opposite his property. They did, however, object to any grant to Comes of the privilege to keep a ferry exclusive of others either on the east side or west side of his lands. They further pointed out that the lands to the east of Comes' holdings were a public property of the inhabitants of Richmond County in communion with the Church of England, while those to the west belonged to Otto and Abraham Van Tuyl, Joseph Ralph, and John Vachte, by whose patents their lands were bounded by the Kill Van Kull and hence they had free access to the water. Otto Van Tuyl, moreover, had erected a wharf, to which a road had been built, and he was engaged in ferrying to New York. One ferry, the petitioners maintained, was not sufficient nor could either Van Tuyl or Comes alone give sufficient accommodation in pasture and hay.⁸

On January 12, 1749, the interested parties with their lawyers appeared, and Mr. Smith, as attorney for Van Tuyl, presented the petition just mentioned which asked that the petitioners be not excluded from the benefit of ferrying to and from New York in such manner as was already used by Otto Van Tuyl and others. When Mr. Smith had finished, a further hearing was set for January 26.⁹ Both sides, however, requested a postponement until March 10, which was granted, and on that day both parties attended. Mr. Lodge and Mr. Nicoll, attorneys for Comes, were heard, whereupon Mr. Smith asked for further time to consider and answer the arguments offered in favor of Comes' petition. The council ordered that a hearing be held on the following Thursday "and that the parties give Notice to each other as soon as may be of any New points of Fact intended to be insisted on and deliver copies to each other by Tuesday next of all Papers to be exhibited in order to prove such Facts."¹⁰

On March 16 several depositions were produced in the council on both sides, and Mr. Smith spoke in reply to the arguments previously given in favor of Comes' petition. Then Lodge and Nicoll asked for more time to prepare their answer, and all parties were ordered to attend for that purpose at ten o'clock the next morning.¹¹ At this meeting, when both sides had been fully heard, the interested parties and their lawyers withdrew. The council then advised the governor to grant to Comes letters patent

"for the establishing & sole keeping of a Ferry to and from the Lands of the petitioner at the North East side of Staten Island to and from the City of New York and also granting to the Petitioner his Heirs and Assignes the soil or ground between High and Low Water Mark the whole length of the petitioners said Land with a Clause in the said Letters Patent restraining all and every person and Persons whatsoever from keeping a Ferry or Ferries within one mile westward from the petitioners said Land for and during the Term of twenty one years and from the Expiration of the said Term of twenty one years until his Majesty's Letters patent shall be obtained for the establishing and keeping of a Ferry within the said Limits." It was then ordered that the council or any three members thereof be a committee to consider the table of fees for the ferry and the number of boats necessary and that Comes deliver his proposals thereon to the committee, which was to report with all convenient speed.¹²

The report was made and approved on May 18, 1749, and the governor was advised to grant a patent to Solomon Comes. The minutes of the council which deal with this matter read as follows:

Mr. Holland, Chairman of the Committee to whom it was referred by Order of the 17th of March last to consider of a Table of Fees for the Ferry to be granted to Solomon Comes and the number of Boats necessary to be employed therein. In his Place reported that the said Solomon Comes had laid before the Committee his proposals thereupon which the Committee having duly weighed and considered were humbly of Opinion that the Ferry to be granted to the said Solomon Comes be under the following Regulations and Rates of Ferriage Vizt.

1st That the said Solomon Comes be obligated to keep two sufficient Boats for the Transportation of Travellers and Horses and all Neat Cattle and Goods of Bulk and also one RowBoat For the Transportation of Travellers.

2^{dly} That he be obliged to keep a good and sufficient Dock for landing and taking off of Travellers and Horses and neat Cattle with Ease & Conveniency.

3^{dly} That the said Solomon Comes shall duly attend and give no unreasonable delay to any Travellers longer than the proper Time of Tide for transporting Wind and Weather permitting.

4^{thly} That he shall demand or take no other Fee or Reward for transporting any Traveller Horses Cattle or

other Goods than the Fees Contained in the Table under written or such other Fees as may be hereafter established by Law Vizt.

For transporting every single Person	£ 0, 3, 0
If two Persons only, Each	0, 1, 6
If three Persons only, Each	0, 1, 0
If four or any greater number each	0, 0, 9
For every Man and Horse	0, 3, 0
For every Ox Steer or Cow Each	0, 3, 0
For every live Calf or Hog	0, 0, 6
For every live Sheep or Lamb	0, 0, 5
For every dead Sheep Lamb or Calf	(Ms. defective)
For every full Pipe or Hogshead	0, 6, 0
For every empty Pipe or Hogshead	0, 1, 0
For every Trunk of Chest with Goods	0, 1, 0
For every empty Trunk or Chest	0, 0, 9
For every chaise or chair	0, 4, 0

And so in proportion for all other Goods and Things mentioned in the said Table of Fees.

5thly That the said Solomon Comes be obliged to hang up and keep in the Entry or most publick Place of said Ferry House the said Table of Fees and

6thly That the said Solomon Comes be not obliged to transport any Person or Traveller Horses Cattle or Goods from the first day of November to the first day of March after Sunset without double fees nor after eight of the Clock at Night from the first day of March to the first day of November without double Fees.¹³

Comes thus emerged victorious from the contest, and his patent was issued on August 14, 1749. Otto Van Tuyl, however, in the bitterness of his disappointment spoke so contemptuously of the governor and council that Comes made an affidavit concerning his words before the mayor of New York. When this affidavit was read in council on September 29, the governor was advised to order the attorney general to prosecute Van Tuyl for his remarks.¹⁴

Richard Bradley, the attorney general, at the October term of the Supreme Court of Judicature presented an information. In it he described Otto Van Tuyl, yeoman, as "a man of Contemptuous wicked and Seditious Disposition and Behaviour" and affirmed that on September 10 in Richmond Town Van Tuyl had discussed with Solomon Comes the patent recently granted Comes and the matter of Van Tuyl's keeping a ferry within the limits assigned exclusively to Comes by the letters patent. In the presence of divers of the King's liege subjects Bradley charged,

"the said Otto then and there Impudently wickedly and Maliciously Said and uttered and with a Loud voice Declared these malicious Contemptuous and opprobrious words Following to witt I (him the said Otto Van Tuyl meaning) will ferry as long as I have Life and I (him the said Otto Van Tuyl meaning) Do not Care for the Governour and Councill (his Said Excellency the Honourable George Clinton and his said majesties Council of this province meaning) and they (his said Excellency the Honourable George Clinton and his said majesties Council meaning, may all Kiss my arse (his said Otto Van Tuyl's meaning) and you (the said Solomon Comes meaning) too, may take the patent . . . and wipe your arse with it." After some further remarks as to Van Tuyl's great and manifest contempt of the King and his laws and the "evil and most pernicious Example" for all others in like case offending, the attorney general requested due process of law against Van Tuyl.¹⁵ Van Tuyl entered a plea of not guilty to the information filed against him,¹⁶ but, as the minutes of the Supreme Court for this period are wanting, the outcome of the case is not known.

Comes did not enjoy his patent for long, as is shown by the following advertisement which appeared in a New York paper in November, 1750: "Thomas Lepper who lately kept Tavern opposite the Merchant's Coffee House in New-York, is removed to the Ferry-House on Staten-Island, late Solomon Combs where he will continue to keep good Entertainment, and has good Boats and Boatmen to attend the Ferry, and all Gentlemen and Travellers may depend on the best Attention and Usage."¹⁷ The same newspaper on December 16, 1751, informed the public that the plantation whereon Solomon Comes lately lived and then in the possession of Thomas Lepper was to be sold or let for a term of years with the ferry to New York. Lepper on April 2, 1752, had auctioned off his domestic animals, negroes, household furniture, wagon and sundry farming tools.¹⁸

By September 18, 1752, John Watson had taken a lease of the ferry "where Thomas Lepper lately lived," and Watson and Hannah Jones were keeping the ferry house.¹⁹ Watson, however, was soon desirous of a change, for in December, 1754, he advertised his 150 acre farm and ferry for sale or rent for a term of years,²⁰ and put up his houses, two passage boats, live stock, farming utensils and household furniture for sale at auction on

September 17, 1755.²¹ By March 1, 1756, and presumably at some time before then he had taken over the Upper Ferry at the Narrows near the Watering Place.²²

Almost immediately after Watson auctioned off his goods on September 17, 1755, Martin Ducket moved into the property and as early as September 22 announced in the press that he was keeping the ferry "lately in the tenure of John Watson."²³ He had rented the ferry, which he was operating with three good boats, in company with Scotch Johnny, the tavernkeeper near the Whitehall Ferry stairs in New York City. They would transport passengers between New York and Staten Island, or, if desired, from either place to Long Island, and, in case of an emergency, a boat could be secured by applying either to Scotch Johnny or Ducket.²⁴ This partnership, however, was not of long duration, for Ducket was found dead in one of his boats on a Monday evening in the early part of December, 1756, soon after he had assisted one of his boats to put off from the wharf with passengers, and the coroner's jury found the cause of his death to be apoplexy.²⁵

His wife carried on the business for a short time, and on January 17, 1757, Joseph Richards advertised that his stage would leave Isaac Dote's near the Amboy Ferry on Monday and alternate weekdays and carry passengers for a fare of three shillings to John Watson's, Mrs. Ducket's and Mr. Vantile's and then proceed back to Dote's on Tuesday and alternate weekdays.²⁶ Mrs. Ducket remained in charge for only a few months, and "the house, farm and ferry on Staten Island, late in the tenure of Martin Ducket, deceased," were offered on February 14, 1757, to be let for a term of years. Those who were interested were to apply to John Leake near the Fly Market in New York.²⁷ Anne Ducket, Martin's widow, auctioned off her late husband's hay, livestock, farming utensils, boats and household furniture on April 13.²⁸

The next keeper of the ferry was Rem Simonson, who was in charge at least by June 6, 1757,²⁹ and presumably had moved in after Anne Ducket's auction in April. Before August 4, 1760, Simonson had died, for at that time his widow offered the farm and ferry for sale or rent for a term of years.³⁰ The proof that Simonson had been keeping the ferry originally patented to Solomon Comes is found in the following notice which appeared in the *Pennsylvania Gazette* of December 11, 1760: "This is to

inform the Public, that James Johnston, that keeps the Naggs-head in Elizabeth-Town has removed to Staten Island, and keeps the Ferry formerly kept by Mr. Simonson about 400 Yards below Mr. Douglass's Ferry, where may be had, Entertainment for Man and Horse, and good Boats to pass to New York." Indeed, Johnston had taken over the operation of the ferry by September 1, 1760, at the latest.³¹

Johnston was provoked by the conduct of his neighbor and competitor, William Douglass, to write the following notice on June 26, 1761: "I am sorry to inform the Public, that Major Douglas has frequently pawn'd his Honour, by telling Gentlemen that there were no Boats at Johnston's Ferry, but for want of Faith, they have come, and found one, and sometimes two. James Johnston."³² It was in July that the 40th and 42nd Regiments of Foot were encamped on Staten Island between Watson's and Johnston's ferries, and doubtless these two ferrymen and Douglass, too, were anxious to attract as much trade as possible for their ferries and taverns.³³

Some years later a misfortune overtook one of Johnston's boats, though through no fault of the owner. On the afternoon of October 7, 1764, one of his ferries, which was carrying two passengers, a chaise, two horses, and the skipper, was overturned near Staten Island. One of the passengers, the "waiting-man" of a gentleman from Philadelphia (the master had remained on shore) insisted on taking the helm, while the other passenger, Mr. Nathan Ogden, insisted on having the reef let out. As a result of the passengers' interference the accident took place. The waitingman was drowned, but Ogden and the skipper, after wrestling with the waves for an hour, were picked up by a gentleman from the island who had put out instantly on sight of their misfortune. The horses were saved with difficulty, but the boat and tackling soon disappeared except for a few inches of her spindle. It was anticipated that the ship and the curricule could soon be recovered. Johnston warned through advertisements in the press that passengers in the future should refrain from interfering with the boatman, and he assured his clients that he had now ballasted his boat with wood so that it could not sink.³⁴

Possibly there were other troubles to discourage Johnston or his lease may have expired. In any event it was advertised in January, 1766, that the ferry, which he was still operating, on the

north side of the island, with its house, five rooms to a floor, two good docks etc, was to be let or sold, and before May 19, 1766, Johnston had left.³⁶ The ferry service was apparently discontinued, for in March, 1767, there was advertised to be sold or let a property of 144 acres adjoining the Glebe³⁷ on Staten Island, a place which had been occupied as a tavern and ferry and afforded a prospect of the city and harbor and of the Narrows and Kills. Those interested were to apply to the printer of the paper or to John Leake in New York.³⁸

On April 4, 1768, one Alexander Ogg announced in the press his revival of the Staten Island ferry formerly kept by James Johnson (Johnston) and informed the public that his boats would also attend at the Whitehall Slip in New York, where the boatmen could be found at Nicholas Johnson's at the end of the same slip.³⁹

The length of Ogg's tenure is not known, but perhaps it was not for more than year, as Benedict, who does not cite his source, indicates that Gozen Ryers' (or Ryerson's) ferry dates from 1769.⁴⁰ At any rate, Ryers did actually acquire the ferry at the entrance to the Kill Van Kull and advertised it for sale in February, 1779.⁴¹

XI. HAZARDS OF CROSSING BY FERRY

In the Sections dealing with the ten different ferries which at one time or another were located on Staten Island during the Colonial Period reference has been made to numerous mishaps which befell the boats or to rescues which were performed by them. Lest the impression be given that these were the only such incidents, other examples recorded in contemporary newspapers may be noted.

Thus, one Saturday, late in November, 1729, the ferryboat crossing from Staten Island to Perth Amboy with seven men and their horses on board was upset by a sudden gust of wind and two of the men and two horses were drowned.¹

Sometimes storms or ice rendered all transport by ferry impossible. During the first half of January, 1750, a ferry from Staten Island found itself unable to put in at New York City and it was, indeed, fortunate to escape shipwreck. While coming over to New York it "got fast in the ice and drove up by the City,

and afterwards drove back again, without being able to get clear. They continued in a deplorable condition till towards the next Evening, without Succour, when they happened yet again to be at the lower Ferry in the Narrows, on the Long Island Side.⁷²

Under a New York date line in a Pennsylvania paper, in 1784, we read: "On Tuesday afternoon last, we had here a very sudden Gust of Wind and Rain, attended with Thunder and lightning from the W. N. W. which was so hard as to blow by the Roots several Trees in and about this City"

"A Brunswick Boat, in coming across our Bay at the Time the Squall happened, was overset therein, and five out of eighteen Passengers in her, drowned in the Cabbin, entirely owing to the Obstinacy (or rather Unskilfulness) of the Boatman, in not preparing for the same when desired. The other thirteen were taken off her Deck by one of the Staten-Island Passage-Boats, who being near, bore away to her relief"⁷³

In January, 1768, a newspaper told of another harrowing adventure and lucky escape. The item reads: "We hear that one of the Ferry boats, belonging to Staten-Island, put off from the Ferry stairs on Sunday last, with only a single man on board, who by reason of the extreme cold, became unable to manage the boat, which was driven by the winds, till the man was taken off, almost frozen, by a man of war's boat — The boat, we hear, is lost."⁷⁴

XII. CONCLUSION

In Colonial Times the ferries of Staten Island were a real link with Manhattan, Long Island, and New Jersey. Their proprietors or keepers were at the same time landlords, whose ferry houses were also taverns which afforded entertainment for passengers and their mounts, and for islanders or visitors as well. The boatmen were in some instances negro slaves, trained to the business, and each ferry maintained two or more boats, which were not necessarily of the same kind, though most of them were doubtless of the flat type, propelled by oar and sail, such as that depicted in Hakewell's map of 1746, (page 41), and capable of carrying passengers, horses, livestock, goods, or a stagecoach. In the earlier times, particularly, persons in advantageous posi-

tions on the shore operated unlicensed ferries, but gradually many were carried on through patents issued by the government for a specified length of time and with an official table of fees which could be charged. The ferry owners built and maintained their own docks, but the commissioners of roads saw to it that roads connected the ferries with the principal highways, though Adoniah Schuyler built at his own expense a causeway from his ferry over the salt meadow to the upland.

In addition to ordinary traffic by ferry to and from the island, there was the large number of travellers between the northern and southern colonies who passed through the island, especially in wintry and stormy weather, in transit between New York and Philadelphia. That the ferry business was a reasonably lucrative one is demonstrated by the keen rivalry between various ferrymen on the north shore along the Kill Van Kull. The ferries bulk large in the history of Staten Island, and the men who operated them, more than any other inhabitants of the island, must have been familiar to the stream of travellers by coach or horseback who visited Richmond County as a stage in their travels between north and south.

FOOTNOTES

Section VII

- ¹ *The New-York Gazette and the Weekly Mercury*, May 16, 1774.
- ² *Ibid.*, June 6, 1774.
- ³ *Ibid.*, May 30, 1774.
- ⁴ *Ibid.*, June 6, 1774.
- ⁵ *Ibid.*, July 18, 1774.

Section VIII

- ¹ Land Papers 14, p. 82.
- ² Ms. Minutes of Council 21, pp. 393-394.
- ³ *Ibid.* 21, p. 293.
- ⁴ According to Leng and Davis, *op. cit.* II, p. 880, a Jacob Corsen, Sr., in 1755 owned five slaves. It seems quite likely that these slaves were employed chiefly in operating the ferry.
- ⁵ Loring McMullen, "Rosebank Site of First Ferry 'Terminal' on Staten Island," *Staten Island Advance*, April 25, 1951, p. 10A; William H. Benedict, "Travel Across New Jersey in the Eighteenth Century and Later," *Proceedings of the New Jersey Historical Society* VII (1922), p. 112, n. 2.
- ⁶ *The New-York Gazette; or, the Weekly Post-Boy*, June 28, 1764.
- ⁷ *The New-York Mercury*, July 2, 1764.
- ⁸ On July 19, 1764, the petition of Anthony White of New Jersey for a ferry from Staten Island to Bergen Point was placed before the governor's council (E. B. O'Callaghan, *Cal. Eng. Mss.*, p. 748). There is no record of any action taken. Is it not possible that the petitioner was really

Anthony Whitehead Waters and that there was some error in writing down the name?

- ⁹ *The New-York Gazette: or, the Weekly Post-Boy*, Dec. 10, 1767; cf. *The New-York Journal; or, the General Advertiser*, Dec. 10, 1767, and Leng Davis, *op. cit.* II, p. 683.
- ¹⁰ William H. Benedict, *op. cit.*, p. 112, n. 2.
- ¹¹ *The New-York Gazette; and the Weekly Mercury*, Sept. 16, 1771.
- ¹² *Ibid.*, Jan. 6, 1772.
- ¹³ *Ibid.*, May 16, 1774.
- ¹⁴ Leng and Davis, *op. cit.* II, p. 685.

Section IX

- ¹ Leng and Davis, *op. cit.* II, p. 969.
- ² E. B. O'Callaghan, *Cal. Eng. Mss.*, p. 140.
- ³ Ms. Minutes of Council 8, p. 118, June 14, 1699.
- ⁴ E. B. O'Callaghan, *Documents Pertaining to the History of New York* IV, p. 623, No. 29; *New-York Historical Society Collections* (1912), *Court Records*, p. 173; *Calendar of State Papers, Colonial Series, America and West Indies . . . Preserved in His Majesty's Public Record Office* (London: 1880-1939), year 1699, p. 402; Paul M. Hamlin and Charles E. Baker, *Supreme Court of Judicature of the Province of New York, 1691-1704* (N. Y.: New-York Historical Society, 1952) I, p. 395.
- ⁵ Land Papers 14, p. 29. Late in December, 1748, the Commissioners of Highways mention this road to be laid out from the house of Van Tuij at the Old Road and running to the dock lately erected by him (See John E. Stillwell, *op. cit.* I, p. 48).
- ⁶ Ms. Minutes of Council 21, p. 347 and Hall of Records of New York City, Pleadings, K 852.
- ⁷ *The New-York-Gazette; or, the Weekly Post-Boy*, Oct. 20, 1755.
- ⁸ *The New-York Mercury and The New-York Gazette: or, the Weekly Post-Boy*.
- ⁹ *The New-York Gazette: or, the Weekly Post-Boy*.
- ¹⁰ *Ibid.*, Jan. 17 and July 18, 1757.
- ¹¹ *Ibid.*, June 20, 1757.
- ¹² *Ibid.*, Feb. 25, 1760.
- ¹³ *Ibid.*, March 31, 1760.
- ¹⁴ (Weyman's) *The New-York Gazette*, June 28, 1762, and *The New-York Gazette; or, the Weekly Post-Boy*, July 3, 1766.
- ¹⁵ *The New-York Gazette: or, the Weekly Post-Boy*, Feb. 29, 1768.
- ¹⁶ *Ibid.*, April 18, 1768.
- ¹⁷ *The New-York Gazette; and the Weekly Mercury*, March 20, 1769. This mention of Van Tuij's executors would appear to indicate that the estate owned the ferry in whole (in which case Douglass had been a lessee) or in part, or had advanced money to Douglass towards purchase of it.
- ¹⁸ *The New-York Gazette; and the Weekly Mercury*, June 5, 1769.
- ¹⁹ *Ibid.*, Feb. 26, 1770.
- ²⁰ *The New-York Journal, or, the General Advertiser*, April 5, 1770.
- ²¹ *The New-York Gazette; and the Weekly Mercury*, Feb. 22, 1773.
- ²² *Ibid.*, Oct. 10, 1774.

Section X

- ¹ Ms. Minutes of Council 21, p. 281. This document was read before the council on Dec. 31, 1747.
- ² *Ibid.* 21, p. 293.
- ³ Land Papers 14, p. 14.
- ⁴ Ms. Minutes of Council 21, p. 293.
- ⁵ Land Papers 14, p. 23.
- ⁶ *Ibid.* 14, p. 15.
- ⁷ Ms. Minutes of Council 21, p. 339.
- ⁸ Land Papers 14, p. 29.

- ⁹ Ms. Minutes of Council 21, p. 340.
- ¹⁰ *Ibid.* 21, p. 343, March 10, 1749.
- ¹¹ *Ibid.* 21, p. 346.
- ¹² *Ibid.* 21, p. 347.
- ¹³ *Ibid.* 21, p. 352-353.
- ¹⁴ *Ibid.* 21, p. 363.
- ¹⁵ Hall of Records of New York City, Pleadings, K 852.
- ¹⁶ Hall of Records of New York City, Pleadings, K 854.
- ¹⁷ *The New-York Gazette, revived in the Weekly Post-Boy*, Nov. 26, 1750.
- ¹⁸ *Ibid.*, Feb. 17, 1752.
- ¹⁹ *Ibid.*, Sept. 18, 1752.
- ²⁰ *The New-York Mercury*, Dec. 16, 1754.
- ²¹ See the advertisement in *The New-York Mercury*, Sept. 15, 1755.
- ²² *The New-York Mercury*, March 1, 1756 and *The New-York Gazette: or, the Weekly Post-Boy*, Feb. 29, 1768.
- ²³ *The New-York Gazette: or, the Weekly Post-Boy*, Sept. 22, 1755.
- ²⁴ *Ibid.*, Oct. 6, 1755.
- ²⁵ *Ibid.*, Dec. 13, 1756.
- ²⁶ *Ibid.*, Jan. 17, 1757.
- ²⁷ *The New-York Mercury*, Feb. 14, 1757.
- ²⁸ *Ibid.*, March 28, 1757.
- ²⁹ *The New-York Gazette: or, the Weekly Post-Boy*, June 6, 1757.
- ³⁰ *The New-York Mercury*, Aug. 4, 1760.
- ³¹ *Ibid.*, Sept. 1, 1760. The same advertisement appears in *The New-York: or, the Weekly Post-Boy*, Sept. 4, 1760.
- ³² *The New-York Gazette: or, the Weekly Post-Boy*, July 2, 1761.
- ³³ *The New-York Mercury*, July 27, 1761.
- ³⁴ (Weyman's) *The New-York Gazette*, Oct. 8 and 22, 1764, and *The New-York Mercury*, Oct. 22, 1764.
- ³⁵ *The New-York Mercury*, Jan. 13, 1766.
- ³⁶ *Ibid.*, May 19, 1766.
- ³⁷ The Duxbury Glebe, according to Leng and Davis, *op. cit.* I, p. 450, extended from St. Peter's Place, New Brighton, to Swan Street in Tompkinsville.
- ³⁸ *The New-York Mercury*, March 23, 1767.
- ³⁹ *The New-York Gazette: or, the Weekly Post-Boy*, April 4, 1768.
- ⁴⁰ *Op. cit.*, p. 109, n. 1.
- ⁴¹ *The New-York Gazette: and the Weekly Mercury*, Feb. 15, 1779.

Section XI

- ¹ *The Boston Gazette*, Dec. 15, 1729.
- ² *The New-York Gazette, revived in the Weekly Post-Boy*, Jan. 14, 1750.
- ³ *Pa. Gazette*, June 13, 1754, p. 2, New-York, June 10.
- ⁴ *The New-York Gazette: or, the Weekly Post-Boy*, Jan. 27, 1763.

FROM A DIARY OF 1913

IDA DUDLEY DALE

Our 1953 Annual Spring Art Exhibition was also the 40th anniversary of the first art show ever held by the Staten Island Institute of Arts and Sciences. Miss Ida Dudley Dale, one of only two exhibitors in that show of 1913,¹ still active in the Section of Art, sent us an account from her diary in which she describes the highlights of the evening party which opened the exhibition. We found it informative, amusing, and charmingly written, and thought it timely to pass these excerpts along to our readers. — ED.

"The day was glorious, though somewhat too windy. As we left, on the 7:20 car, the sky above the horizon was a deep, rich orange. Down in the glen at Silver Lake, the trees appeared to be growing out of the sunset tinted water of the lake; while beyond, in a vast expanse of blue and violet, the Jersey mountains, several cities, a bay and two rivers stretched out before us, with bewitching lights sparkling like fire-flies.

"The shades of night had descended over the beautiful harbor, as we alighted at St. George promptly at eight o'clock as the clock in the great tower of Borough Hall told us. We crossed over to 154 Stuyvesant Pl., the home of the S. I. Assoc. of Arts & Sciences.

"A lady in full evening dress met us at the door, directing us to the third floor; where, at the head of the stairs, stood Mrs. Robert W. Gardner, attired in a French costume and hat — having the effect of gauzy silver and black chiffon over soft white satin. She greeted me so pleasantly and said. 'We are very happy to have your painting.' I introduced her to mother, and then she made us acquainted with her companion on the reception committee, Mrs. F. Winthrop White" (Emma Rianhard), who exhibited several lovely landscapes.

"We proceeded into the improvised gallery, hung with white cheese cloth. After helping ourselves to a few extra programs, for friends, we glanced quickly about to locate my portrait of 'Altye Martling Paine,'³ and found it to the right of the entrance.

"It was a great treat for me to see a portrait, by George R. Boynton, who is noted for his portraits of Navy and Army officers, yachtsmen, and other celebrities. He exhibited one of Governor A. J. Newbury — of Sailors Snug Harbor — a masterful piece of work.

"As there were no numbers in the catalogues, it was difficult to discover the titles and artists' names. However, I managed to find that a blueish purple picture, called 'Evening' — which was much like the actual scene we passed at Silver Lake — was the work of Leon Dabo.⁴ Nearby, hung a strange painting which seemed to be a mythological subject — a large white cow or ox, prominently placed in the center, was called 'Overborne,' by Arthur B. Davies.⁵

"I greatly admired a pink blossoming tree, which occupied the whole of a fairly large canvas, by Mr. Otto C. Wigand⁶ and a beautiful landscape, at Stamford in the Cattsills, by Stanley Middleton, with glorious clouds floating above the mountains. We could hardly see the paintings, because of the people constantly passing in front of them, so I shall not attempt to describe anymore, until I take another view. . . . Senator Baynes⁷ said that Mrs. Gardner, Chairman of the Committee on Loan Exhibitions, was too modest to take the platform, and he praised her in highest terms for her 'indefatigable efforts, in season and out of season' to make the exhibition a success; also of the untiring efforts of the hanging committee, who had worked night after night. He then introduced Mr. Adams⁸ — descendant of the famous presidents, and himself prominent in 'New York Art Commission' and the movement to restore the City Hall to its original style."

Mr. Adams "gave a little history of the Association; of how it had previously neglected *Art*, and devoted all its time and attention to Science, but that henceforth the members intend to do differently; and he told of the beautiful new building to be erected on the water front.⁹ He made an interesting comparison between Science and Art — pointing to the pink blossoming tree behind him, he said, 'Now to be scientifically valuable, every leaf should be there, showing every vein and stem, but there would be no *art*.' He reminisced about his trips abroad, when he met Whistler; and during one of the conversations Whistler said to him, 'The collection of Art in the National Gallery is *wonderful*; it is *priceless*, and I believe that it should be under lock and key

and no one allowed to see it! Ordinary people do not understand great art.' Mr. Adams said that upon returning to this country, he told Mr. Brush¹⁰ what Whistler had said, and asked his opinion, to which Brush replied, 'Of course I do not agree, or why should I be painting? I believe that everyone cares for art.' At another time, he was visiting the studio of Sargent. He had always believed that there was something intangible and mysterious about Art, and so he was using many high flown phrases in praising one of the paintings, whereupon Sargent jumped up, and snapping it with his finger, exclaimed 'Why Adams that is mere *paint*.' From that time he has looked upon art differently, as something like medicine, the result of study and practice.

"Mr. Adams complimented the artists upon the excellence of their work, and told the audience that they would be surprised if they knew the prices on the backs of some of the paintings — telling the following anecdote about the farmer, who, when told the price the artist obtained for the painting of his farm, exclaimed, 'That's right stick 'em!'

"Senator Baynes in a formal manner announced, 'The exhibition is opened.' He made us all laugh by saying he was not sure there was to be any refreshments; but with a graceful wave of the hands, Mr. Adams replied, 'Ladies and gentlemen, the refreshments are upon the walls.'"

FOOTNOTES

- ¹ This was a famous year for art, not only for Staten Island but for the country as a whole. In 1913 the art world was rocked to its very foundations by the famous international Armory Show, introducing the United States for the first time to the works of the Modern School of Paris, which were to have so telling an influence on American Art.
- ² Mrs. White is the other active member of the Section of Art who, besides Miss Dale, exhibited in the 1913 Staten Island show. One of her landscapes was also featured in the 1953 spring show. At one time she was Chairman of the Art Committee.
- ³ This painting was hung again as a special feature of the 1953 spring show.
- ⁴ Leon Dabo, a well-known American landscape and mural painter, was scheduled as the speaker of the evening but had to disappoint the group because of the illness of his daughter.
- ⁵ Arthur Bowen Davies was a leading landscape and figure painter of the romantic school of the United States. His later canvases were more symbolical and abstract. He was largely instrumental in the arranging of the international Armory Show of 1913.
- ⁶ Otto C. Wigand, an outstanding professional artist, exhibited at the Paris Salon and the National Academy of Design, and was a member of the New York Water Color Society. He was also well-known for his stained glass designs and woodcarvings. When the Staten Island Art Association

- was founded in 1935 he was elected its first president.
- ⁷ Senator Howard R. Baynes was President of the Association of Arts and Sciences, the name by which our present Institute was then known
- ⁸ Dr. James Quincy Adams was a Trustee of the Association, Chairman of Art Section, and Secretary to the Municipal Art Commission of New York.
- ⁹ Which we have occupied since and now find much too small. — Ed.
- ¹⁰ George de Forest Brush, a noted American painter was first recognized for his painting of the North American Indians and later for his portraits and paintings of children and family groups.

SCIENCE NOTES

ROBERT MATHEWSON and LEE A. ELLISON

Since 1908 official bird census trips have been made each year on Staten Island and records have been filed with the National Audubon Society. On December 21, 1952, a day of continual rain, our observers covered a large part of the island, including the shores from Fort Wadsworth to Tottenville and wooded areas from Sunnyside through the hilly sections to Richmond. The eight participants were: Howard H. Cleaves, Lee A. Ellison, Fred W. Hopping, William H. Lea, Charles Pearson, Robert Mathewson, Casimir Redjives, Thomas Schleich, and Mathilde P. Weingartner. The list is as follows:

1952 CHRISTMAS BIRD COUNT

Red-throated Loon	3	Ring-billed Gull	35
Holboel's Grebe	3	Laughing Gull	3
Horned Grebe	40	Bonaparte's Gull	331
Double-crested Cormorant	1	Mourning Dove	1
Great Blue Heron	1	Barn Owl	2
Black-crowned Night Heron ...	21	Downy Woodpecker	3
Mallard	9	Prairie Horned Lark	3
Black Duck	859	Blue Jay	15
Greater Scaup	1458	American Crow	24
Golden-eye	116	Black-capped Chickadee	3
Bufflehead	114	White-breasted Nuthatch	1
Old Squaw	124	Starling	99
White-winged Scoter	20	Myrtle Warbler	2
Ruddy Duck	1	English Sparrow	45
American Merganser	2	Meadowlark	1
Red-breasted Merganser	16	Redwinged Blackbirds	39
Marsh Hawk	2	Purple Grackle	1
Sparrow Hawk	3	Cardinal	13
Ring-necked Pheasant	14	Pine Siskin	77
King Rail	1	Towhee	1
Coot	1	Slate-colored Junco	44
Killdeer	4	Tree Sparrow	59
Black-bellied Plover	9	White-throated Sparrow	29
Great Black-backed Gull	58	Song Sparrow	51
Herring Gull	1653	Snow Bunting	56

A few of the species observed can be considered "finds" of some note. The 21 black-crowned night herons, seen in a roost of low trees near the home of Mr. Wisorg, 4302 Victory Boulevard, Travis, represent an unusual number to be found together on Staten Island, especially during the winter. The king rail, not seen for many years, was spotted in the marshes behind Marine Park. The dam there had blocked off the salt water and gradually changed the area to fresh water — the preferred habitat of the king rail. Two other birds that had not been seen in recent years at census time were the barn owls and the ruddy duck. The purple grackle also is a rare winter visitor.

It has been known for a long time that groundsel tree (*Baccharis halimifolia*) grows in the salt marshes of Staten Island, though one cannot claim that it is abundant. It is really a woody shrub about ten to fifteen feet tall, is a member of the Composite family, to which the daisy, aster, and sunflower belong. It has the distinction of being the largest in size of any member of the Composite family in the eastern United States. In late autumn its fluffy seed clusters give to the bush a silvery appearance. Generally considered useless, the plant may prove to be economically valuable after all. One of our Island industries that owns a considerable acreage of salt marsh found itself with the problem of a boundary fence across the marshes. Metal fence posts corroded and wooden ones rotted or disappeared by theft or fire. It was decided, therefore, to find what tolerance for salt the groundsel tree might have. Investigation thus far by Lee A. Ellison, the Institute's Research Associate in Ecological Chemistry, indicates that it has a wide tolerance for soil salinity, ranging from slightly salty to about the salinity of the outgoing tide, about 8000 parts per million. A border line of this shrub, therefore, would be to a considerable degree self-perpetuating, for unless seriously burned the shrub grows up again. As a line of demarcation the plantings of this shrub would need to be trimmed out from time to time to prevent its spread from forming a dense irregular mass.

We are always glad to find survivals of rare or unusual plants which have been hiding from us for many years. During the past season Lee A. Ellison found a stand of the knee-high

blackberry (*Rubus cuneifolius*) near the Charleston Oval on Englewood Ave., Charleston. Miss Mathilde Weingartner discovered a few plants of quillwort (*Isoetes Engelmanni*) in a stream in the northern portion of Wolfe's Pond Park. Though resembling a tuft of coarse grass that chooses to grow in the water, this plant is actually a fern ally, producing two kinds of spores (microspores and macrospores) which are concealed in a membranous pocket at the base of each blade or tubular leaf.

Mr. Hans Behm, Assistant Curator of Science from February 1 to December 1, 1952, resigned from the Museum staff to devote his entire time to the completion of his thesis for the M. S. degree. He has chosen as the subject for his thesis the origin and constitution of Staten Island's serpentine rock and has done much work in petrographic examination. He has been assisted by Lee A. Ellison in completing chemical analyses of samples of the rock from widely varying localities. In a future issue of the *Proceedings*, after a few more analyses are completed, these investigators will present a paper summarizing their findings.

BOOK REVIEWS

Understanding Art. By Ana M. Berry. (A Studio Publication, Thomas Y. Crowell Co., 1953. \$5.00).

This book was not "written" by Ana Berry in the usual way. It is instead a collection of some of her numerous manuscripts compiled by Judith Wogan and Eleanor Elder a few years after Miss Berry's death. And I wonder if Miss Berry would have approached the subject of "understanding art" in the same manner in which the compilers organized the book.

The volume will doubtless be read by many people — and they will fall into two general classifications — those who know and understand art and those who have no background but do have a desire to learn. The former will undoubtedly profit by reading this book, but I doubt if many of the latter will get beyond the first sentence, which reads, "An appreciation of art can hardly be taught and little may be said that will prove helpful."

If this be true, then for those who do not understand art, for those who do not have the ability to feel (since art is a matter of feeling), art is lost and totally wasted. This negative approach may scare off just those readers Miss Berry is trying to reach, and it certainly does not sound like the Miss Berry who, in her book *Art For Children*, tried to bring to the notice of younger readers the fun to be found in looking at pictures.

The physical make-up of *Understanding Art* is based on Miss Berry's conclusion that "since the language of art appeals to the emotions, the study of works of art alone can teach us. Little, therefore, need be said beyond stating a few general principles and the elements that go to make up the language (of art)." The compilers have, therefore, used only sixteen pages of print and have reserved the major portion of the book for 98 color and monochrome plates by the masters.

The book is divided into five sections *Fundamental Principles*, *Vision*, *Art and Realism*, *Oriental Art*, and *Fundamentals in Sculpture*. Each section includes plates which illustrate the various techniques, compositions, and treatments. The plates are presented for the most part in pairs, and a comparison of the two made by the author. For example, on pages 24 and 25 we find

monochrome plates of a drawing, *La Gioconda* by Leonardo Da Vinci, and a 12th century statue of Buddha. Miss Berry notes, "Here we have two different sensibilities, two different media and and two different traditions, yet evoking the same feeling of solidity and repose. To the superficial observer there is an analogy in two smiling figures though one might be said to be smiling inwardly and the other outwardly. The Gioconda is a drawing which has the structural solidity of sculpture: the Buddha, is form reduced to essentials, showing architectural qualities with a sense of volume, of scale, of equilibrium."

Again, on pages 62 and 63 we have a still life by Cézanne and another by Gauguin. Miss Berry points out that in one the artist is preoccupied with form and gives weight and volume to objects, while in the other (which consists of about the same subject matter) objects are treated as decoration, as an interesting arrangement only of shapes and colors.

This method of presentation is thought-provoking to the initiated, but in this reviewer's opinion, of doubtful value to those who know little or nothing of art. However, considering the volume's handsome presentation of subject matter and its provocative ideas, both the average and the above-average lover of art, upon "reading" this book, should find his horizons broadened and his outlook changed. This reviewer, at least, found it so and expects to look at future exhibitions with an entirely different point of view.

RICHARD A. ROGERS

Our Amazing Birds: The Little-Known Facts About Their Private Lives. By Robert S. Lemmon. (American Garden Guild: Doubleday, 1952. \$3.95).

This book consists of 102 sketches, each on a separate species of American birds. Its general makeup is similar to Kieran's *Nature Notes*, and it is equally well written. Eckelberry's black and white illustrations are not only good art but well illustrate the theme, which deals primarily with habits or "personality traits," range, and habitat.

The scope appears to be ample. While some readers may be disappointed in not finding their favorite species included, the line had to be drawn somewhere and it would be difficult to improve upon the combination of species chosen.

Mr. Lemmon has confined himself to facts, and they are truly stranger than fiction. He tells of things that we might never witness nor fully understand from our own observations, but knowing, may yet see first hand or more fully appreciate when seen again — the water ouzel's submarine abilities; why wild geese fly in V formation; how gulls open clams; why few, if any, woodpeckers are caught by hawks. What he tells of petrels may encourage some to seek the answer to why other larger birds avoid them.

Mr. Lemmon's book will not only add to the knowledge of those who have studied birds for some time but should stimulate the interest of those whose interest in birds has been passive or newly acquired. The style in which this interesting subject matter is written makes the reading a pleasant experience which will be enjoyed not only by adults but by young readers as well. Even the sub-titles are poetic as well as descriptive: "the chimney swift — a flickering missile in the summer sky." The number of readers who do not learn something new about birds from this work will be few indeed.

WILLIAM H. LEA

Audubon's Butterflies, Moths, and Other Studies. Compiled and edited by Alice Ford. (A Studio Publication, Thomas Y. Crowell Co., 1952. \$5.75).

A Mrs. Kirby Chambers of New Castle, Kentucky, recently made available a fifteen page Audubon sketchbook which she acquired from a descendent of the Basham family. Audubon — indebted to the Basham family for their hospitality while he was visiting Pittsburgh in 1824 — had given it to Mrs. Charles Basham. This sketchbook is the excuse for the present book, consisting of 120 pages, which include 40 plates (17 in color) and six of bibliography and index. It seems the author had to do some scraping to make a book at all, utilizing every means of padding. Certain figures reproduced in color are also shown in black and white; certain well-known bird plates are shown complete and with blowups of details to bring out certain insects and reptiles used for background and incidental effect. We are told that many of these details were not painted by Audubon at all, but mostly by Miss Maria Martin, his able assistant, who in this reviewer's opinion could paint insects much better than Audubon.

Audubon's insects suffer by contrast with Titian Peale's and Lesueur's, examples of which the author includes — rather imprudently — for comparison with contemporary artists.

The illustrations from the sketchbook are possibly interesting from an artistic or historical point of view, but they certainly do little for Audubon's reputation as a naturalist. Some are quite realistic — such as the painted lady butterfly (p. 17) — but, as the author admits quite candidly, "Others tend toward the impressionistic or symbolic."

The text, which is the less important part of this book, is devoted partly to a history of the sketchbook, but includes a review of many of the highly familiar incidents of Audubon's life. The author takes issue with Audubon's critics and detractors, both past and present, with many valid arguments. However, on page 16 she quotes herself in *Audubon's Animals*, saying "the creator (Audubon) is to be regarded as a naturalist in a limited sense only, as a genuine ornithologist and zoologist never, but as an *artist* of unchallenged genius, first and last."

We naturally agree with the latter, and certainly any ornithologist and zoologist would agree with the first part of this statement; but why, then does Miss Ford defend Audubon so vehemently in the famous rattlesnake vs. mockingbird controversy toward the end of the book? Herpetologists are willing to admit that rattlesnakes will occasionally climb low bushes and even trees; that occasionally, although rarely, they will even eat birds — but Audubon's rattlesnake threatening the mockingbirds with open mouth and erected fangs is a bit too much to "swallow!"

Rather than trying to defend Audubon as an authority on rattlesnakes — which neither he or Miss Ford could ever pretend to be — it would have been better just to let Audubon's herpetological credit be built up by his really masterful dissertation on the powers of "fascination" attributed to snakes, a myth he debunks with arguments to which little can be added. Two pages of the present book are devoted to this, a fact arguing nice discrimination on the part of the author, and proving that Audubon was a good observer and possessed a certain amount of scientific skepticism, regardless of whatever artistic license he may have exercised at times.

Altogether there is little in this compilation to recommend it to the average nature bibliophile, and he would hardly be justi-

fied in straining his budget to the extent necessary to include it in his library.

CARL F. KAUFFELD

Green Treasury: A Journey Through the World's Great Nature Writing. Edited with an introduction and interpretive comments by Edwin Way Teale. (Dodd, Mead & Co., 1952. \$5.00).

With every generation there comes to the fore some new writer, or writers, on nature that capture the reading public's fancy and, with succeeding works, build a public following. Those whose memories go back twenty-five years will remember the tremendous appeal of the Beebe books and even further back of the Seton stories of nature. With some of the writers on nature the appeal has been their facility with words, the beauty of their writing. Others have been masters of mood who could take the reader away from the stresses of human life to the reflections of peace and quietness of woods and countryside. Some writers have had their appeal through their ability to convey their knowledge of nature in a manner that the layman could readily understand.

The particular ability that has generally marked the writings of Edwin Way Teale is his pre-eminence in the field of nature illustrations by means of photography. The present book, however, makes no use of the camera. Rather it reverts to Mr. Teale's earlier training in editorial work. Those of his followers who took pleasure in *Grassroot Jungles*, *The Golden Throng*, and *Near Horizons*, will find little of Teale in the *Green Treasury*. But perhaps unlike those works, which one might read once or twice and put away on the library shelf, this is a book that can be sampled repeatedly. The short abstracts from the works of many authors suggest that this book might be kept on the bedside table, to be read a little at a time and often, perhaps even for the overnight guest who, if furnished with a double-length novel, might prolong the stay until he finished the story.

The works of the famous authors contained in this anthology, including our own William T. Davis, John Kieran, Rutherford Platt, Gilbert Klingel, and Roger Tory Peterson, would comprise an extensive library, so the purchaser of this book well may feel obligated to Mr. Teale for his editorial condensation. If any reader feels deprived of Teale's own writing he can turn to two excerpts from earlier books. Those who turn

to page 469 will see why Teale's writing so admirably supplemented his ability in illustration.

Though our young space cadets of today probably find no pleasure in the works of Ernest Thompson Seton, I cannot help but remember the influence his books had upon me. Some abstract from one of his books might seem to be a part of any collection such as this; and it is a matter of regret that the writings of Lee A. Ellison are printed on such perishable paper as newsprint and have not been collected in book form, for surely here, too, is an author who deserves a place with the present company of this anthology.

JOSEPH F. BURKE

American Trees: A Book of Discovery. By Rutherford Platt. Photographs and color plates by author. (Dodd, Mead & Co., 1952. \$3.50).

Out of the thousands of useful, and oftentimes lengthy books on trees, many of which are so discouragingly technical as to turn away some of the most active tree lovers, comes along, just at the right time, the very kind of book some of us have been looking for. Such a book is this one by the well-known author of *This Green World*. There are sixty-seven excellent photographs by the author, twenty-one in natural color, with some two-hundred delightful pen drawings by Margaret L. Cosgrove of leaves, flowers, buds, cones, twigs, and certain forms of bird and small wild life depending upon our American trees.

Those of us who give much of our free time to saving our natural heritage have little opportunity for deep study and research; nevertheless we do seek ways and means of becoming better acquainted with the great out-doors, and when so fine a book as this arrives, and in such compact form, we take on renewed courage to arouse both the specialists and the layman to give time to the important subject of tree preservation within the City, the State, and the Nation.

Unless the reader of this volume is already an expert, there will be an infinite number of surprises, or "discoveries," of hitherto unknown facts concerning the life and character of each kind of tree, where in every case "something marvelous goes on." The book is one in which the reader will not likely want to pick and choose but will read from cover to cover, although no doubt there

will be a few favorite subjects.

The trees included, both great and small, are conveniently grouped under seven sub-divisions. These are as the author states, *The Seven Regions of Tree Discovery*. They are found in: the Northeast, including our immediate neighborhood of Staten Island and New York; the Middle West with some of its own characteristic trees; the South with its own indigenous species and adaptations of others with which we are familiar here in the North; Southern Florida, not so vast in territory but certainly unique, especially the sub-tropical trees; the Northwest, the most extended forest region of the nation; California with its wonderful sequoias and many other native trees; and the Southwest, with its unusual and even fantastic trees and places.

There is refreshing completeness and simplicity in the author's arrangements, the descriptive material about each species ending in each case with its own title in Latin. The author is concerned not merely with identification but especially with what is most interesting and important about each tree, what products are made of it, whether it makes good firewood, etc., etc.

One feels, reading this book, as though he were actually transported to these charming regions to discover, with the author, all the important and interesting facts about their trees. It would indeed be difficult to imagine any serious reader of Mr. Platt's book taking the role of the weak by-stander in any movement to promote a genuine love for one of our greatest natural resources.

WILLIAM LYNN McCracken

Picture Book of Astronomy; Picture Book of Chemistry; Picture Book of the Earth; Picture Book of Molecules and Atoms; Picture Book of Radio and Television; Picture Book of the Weather. By Jerome S. Meyer. Illustrated by Richard Floethe. (Lothrop, Lee and Shepard. c1945-51. \$2.00 each volume).

Here is science enlivened by imagination and originality, and presented without condescension to young children.

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These are some of the questions answered by the series. Many are questions frequently asked by children; others open up the world of science in its relation to phenomena the child sees every day. Explanations are made vivid by reference to ordinary things: "Atoms are like letters — Molecules are like words," and "These fierce winds blowing in a huge circle, miles wide, resemble a sort of giant doughnut with nothing in the center. This center of the hurricane is usually about six miles wide . . ."

Some simple experiments are included, but they are closely related to the text. The illustrations are attractive, and, like the text, show an original approach to elementary science.

There are several inaccuracies in *The Picture Book of Chemistry* which might have been avoided by careful editing. Those parents who contemplate buying science books should weigh these factual inaccuracies in the one volume against a vivid, stimulating introduction to the subjects included in the series as a whole — an introduction which will lead to further reading in more advanced and authoritative books.

KATHERINE DRISCOLL

American Fisherman's Guide, selected and edited by Bill Bueno, introduction by Ed Zern. (Prentice-Hall, 1952. \$5.95).

Almost any fisherman, after completely reading this book, which is made up of articles contributed by many authors expert in the field of fishing, will learn something extra about fresh water fishing and thoroughly enjoy himself at the same time. I have fished with many of the authors and find myself once again fishing beside them as I read.

The introduction by Ed Zern, one of America's best fly tyers and fresh water fishermen, is presented in the typically humorous style of his hunting and fishing writings. The book can be read straight through, but easy reference reading is facilitated because of the following five subject divisions: Part I, *Fishes And How They Live*; Part II, *Fishing Without Hooks*; Part III, *Angling Tackle And General Methods*; Part IV, *Fishing Through*

The Ice; Part V, What You Can Catch — And How.

All of this adds up to an instructive and comprehensive treatise on the subject. Different species of fish and the fishing methods used in different locations of the United States are carefully charted. Fundamentals in fishing, as given, are excellent for the novice. For instance, the basic patterns for wet and dry fly fishing are easily understood — and even for the expert they are a good refresher. The article by Larry Koller, Fishing Editor for *Argosy Magazine*, is especially fine, and it is interesting to note that one point he makes is that, in order to catch larger trout, one should use natural bait, such as minnows, nightcrawlers, and frogs.

The explanatory diagrams, the half tones and color plates are all excellent and useful. These, plus the excellent text, give all the important information and "know how" for better fishing, whether the reader is a beginner or an expert who needs a refresher.

It is amazing, however, to realize that methods of fishing today do not vary a great deal from those of Isaak Walton's time. For example, the art of tying flies and of artificial fly fishing is the same today as it was in 1653, the publication date for Walton's *The Compleat Angler*, the first book published on its subject. Bill Bueno's book is without doubt its 20th century counterpart.

The general theme of the book expresses perfectly my own sentiments, that in fishing the purpose is not to fill the creel, but to enjoy nature, relax from the everyday routine of work, and possibly to extend life a little longer.

FERDINAND W. DI NOIA

Robins In The Garden. By Olive L. Earle. (William Morrow and Co., 1953. \$2.00).

As usual it is a refreshing pause to read another delightful and informative story on nature, as written and illustrated by Olive L. Earle. This book on the family life of robins is primarily for children between the ages of 6 and 10, but its animation can be fully enjoyed by adults who may pick it up. The unusual opportunity to "peek in" on the birds' activities is also conveyed through the expressive and accurate illustrations.

Olive Earle, who is Mrs. Harry Daugherty of New Brighton in private life, has written and illustrated other nature books including *Thunder Wings*, *State Birds And Flowers*, and *Birds and Their Nests*, all of which have been reviewed here before and, we hope, are thoroughly familiar to our readers.

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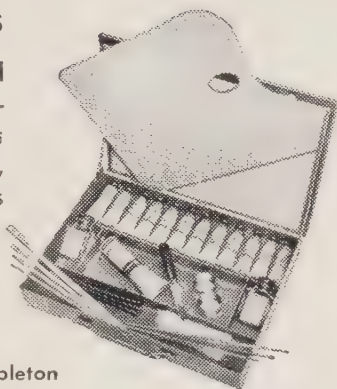
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Proceedings

of the

**STATEN ISLAND
INSTITUTE OF ARTS
AND SCIENCES**

Conservation Issue

**Volume XV
Fall 1953
Number 2**

PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES

Josephine S. Antonini, Editor

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CONSERVATION IN AN URBAN ENVIRONMENT

A CONFERENCE HELD AT THE STATEN ISLAND MUSEUM
ON MAY 16, 1953

Both the Institute and its Section of Natural History have for many years considered the promotion of a knowledge of and an interest in conservation one of their major obligations to the community. By means of published articles, meetings, lectures, movies, classes, and field trips this work has been carried on. Unfortunately, progress has been painfully slow. At this particular time in our history this fact is doubly distressing, not only because of the necessity of doing everything we can on a national basis to preserve our resources, but also because of the rather special situation in our own borough. We are changing rapidly from a predominantly rural area to an urban one, and all the signs point to the helter-skelter sort of growth here that has produced poorly planned communities all over this country.

An important part of the problem is concerned with adequate breathing areas. For this purpose parks, playing fields, shaded streets, and gardens are vital but all too rare in some of our cities. Of equal importance, and rarer still, is the preservation of tracts of lands to be left in their natural state. Only by showing city dwellers, however, what nature in the wild is really like can we properly present the importance of conservation; and of equal significance is the fact that this lesson, once learned, often becomes the principal basis for an expansion of spirit and vision that makes for better citizenship.

Staten Island is still fortunate enough to have a great deal of real country left, but it is being threatened from all sides. With this in mind the Institute and the Section of Natural History decided it was high time to call attention to the situation before it was too late. An all-day conference was planned, therefore, for May 16, 1953, in which groups of experts would explore the basic problems and indicate practical approaches to their solution.

A committee was set up, therefore, to work with the Director of the Institute and the President of the Section of Natural History in planning the conference. This committee was com-

posed of Mathilde Weingartner, Chairman, I. C. G. Cooper, Lee A. Ellison, Robert Mathewson, Casimir Redjives, and Edwin A. Rundlett.

A general meeting was set for 10:30 A. M. with Kenneth Morrison, as the principal speaker. Mr. Morrison's speech, placing the theme of the conference in its proper setting, is reproduced as the first article in this volume. The afternoon was devoted to three round-table discussion groups, as follows:

- I. SURVIVAL OF WILDLIFE IN A CITY
Lee A. Ellison, wildlife authority and nature columnist, moderator.
"Animal life in an urban area" by Sergius Polevoy, State Game Warden, in the absence of Harold Canepi.
"Establishing a wild life preserve in an urban area" by George Peters, Deputy Commissioner of Public Works of Nassau County.
- II. CONSERVATION AND THE HOME OWNER
Mrs. Joseph Wilson, Richmond District Director, New York State Federation of Garden Clubs, moderator.
"Three basic demands — soil cover, erosion control, and maintenance of water table" by Harry Wilson, Chairman of the Waterworks Committee of the American Public Works Association.
"The control of smog and air pollution" by Dr. Natale Colosi, Chairman of the Richmond Borough President's Committee on Air Pollution Abatement.
"Gardening, landscaping, and neighborhood planning" by James J. Mallen, Richmond Borough Director, New York City Department of Parks.
"Street trees and street planting" by Dr. Ernst J. Schreiner, Forest Geneticist, U. S. Forest Service.
- III. CONSERVATION EDUCATION
Dr. William H. Bristow, Director of Curriculum Research, Board of Education of the City of New York, moderator.
"Winning the voter to conservation" by Charles Mohr, Director of the Audubon Nature Center, Greenwich, Conn.
"Community cooperation in conservation" by Henry Houghton, Field Representative of the Stony-Brook Millstone Watershed Association.
"Demonstration of conservation education in a museum" by Robert Mathewson, Curator of Science, Staten Island Museum.

In the space available it is impossible even to summarize the many excellent ideas and suggestions presented in these meetings. One or two central themes were established, however, in each session, and I feel that these should at least be mentioned.

There was general agreement in Mr. Ellison's session on the necessity, in training well-balanced individuals, of establishing wilderness areas easily accessible to every city; for permanent and sympathetic agencies in charge; and for a practical long-

range plan for use and development. But most of the discussion centered around the problem of vandalism. Mr. Peters insisted that a wildlife sanctuary cannot be maintained in an urban area without an enclosing fence with barbed wire on top, a locked gate, and a watchman. Although this viewpoint seemed a bit extreme to some, it was recognized as a warning which on Staten Island, with its more than 3000 brush fires each year, must be taken fully into account.

Mrs. Wilson's session on *Conservation and the Homeowner* was the most diversified of all because of the great variety of problems with which property owners must contend. In matters of general concern, such as proper water and soil management, discussed by Mr. Wilson, and the industrial menace of air pollution, outlined by Dr. Colosi, there is little the householder can do alone. It is to his special interest, however, as a responsible citizen to join with his fellows in setting up and enforcing proper standards and practices in these fields. Mr. Mallen and Dr. Schreiner, however, took up subjects more closely related to the homeowner's every day life. The general conclusion seemed to be that, although each homeowner might manage his own plot well, he can do little for his neighborhood or community without organization and a sense of responsibility beyond his own boundaries. Much can be done in relatively small areas through active neighborhood associations; but large projects, such as the planting of boulevards or the community-wide protection of shade trees, generally require the support of the city, which in the case of Staten Island can usually be won only by marshalling the full force of public demand.

In Dr. Bristow's session on conservation education one important conclusion was that, although getting the proper information to the public through all channels (films, booklets, exhibits, lectures, letters to legislators, etc.) is important, actually such information is of little value unless the public learns to appreciate and enjoy the out-of-doors. This point was beautifully illustrated from two different angles — by Mr. Mohr in his work at the Greenwich Audubon Center with its emphasis on the pleasures as well as the values of nature, and by Mr. Houghton with his emphasis on the persuasive lessons learned by a whole community from even the simplest conservation projects actually carried through — such as a new fish pond on a farm or the clean-

ing up of a polluted stream. A third approach was illustrated by Mr. Mathewson in his presentation before a group of school children of the sort of lectures on conservation given each year in the Museum to visiting classes. It was generally conceded that his methods were likely to create strong impressions but that no program of conservation is complete without work in the field.

The climax of the conference came at 8:15 P. M. when Dr. Paul B. Sears, Chairman of the Conservation Program of Yale University, in the absence of Louis Bromfield, gave the last William T. Davis Memorial Lecture of the season under the title "Revolution in Conservation," which lecture is reproduced as the second article in this volume.

This conference, we hope, was the beginning for the Institute of an intensified conservation program on Staten Island, including the permanent establishment of a suitable wildlife refuge in the New Springville area. The City of New York already owns enough land there, of which the present inadequate Davis Sanctuary is a part, to guarantee a refuge of sufficient size and variety of terrain to form the basis of an effective education program. It is our hope that the city will work with us in this matter so that the Institute can make fully effective the important lessons of conservation so badly needed in this community.

JAMES L. WHITEHEAD

NEW PUBLICATION

Our members and friends will want copies of a handsome booklet recently published as an important part of the Institute's conservation program. It is *Plants and Animals of Staten Island* by Olive L. Earle, well-known Staten Island author of children's books on natural history. With 20 out of 24 pages beautifully illustrated by Miss Earle, the booklet summarizes the more important species of plant and animal life in a manner that makes learning about nature attractive for both children and adults. It is on sale at the Museum for only 50 cents a copy and, at that price, makes an attractive gift for any occasion.

CONSERVATION A BASIC NECESSITY

WITH SPECIAL REFERENCE TO NEW YORK CITY

KENNETH D. MORRISON

SIGNIFICANCE OF CONSERVATION OF NATURAL RESOURCES TO THE NATION

Yesterday I received in the mail from the Nature Conservancy an announcement of a "Population and Preservation Scholarship." The questions which will be investigated by the person who receives this scholarship are so much in line with the subject of our discussions that I think they bear repeating:

How can we preserve the natural world and its spiritual, esthetic, emotional and material values in the face of increasing human population and economics development?

How can we direct the development of our civilization to recognize and preserve the irreplaceable values of nature?

What is the optimum balance between population density or intensity of land use on the one hand, and the preservation of natural beauty on the other?

What effect will the continuation of population increase have on our cultural life in the future?

These are important considerations, aren't they? The truth of the matter is that every year conservation of natural resources becomes more urgent, and although public interest seems to increase, apathy is still widespread. Why?

Perhaps the reason is that the decline of our resources is not dramatic. Ding Darling had the right idea. He said that if we should pick up our morning papers and read, "One hundred million acres of land in United States sinks into sea," horror would electrify every nerve cell of the populace. We would clamor for answers. What happened to the people who occupied that land? What will the loss mean to our national economy and our future?

Actually we have witnessed that calamity, but it has happened slowly. The loss of once productive land is a continuing process, but there are few who regard it with alarm. To start with we had more than 600 million acres of good tillable land in the United States. Now we have only about 500 million acres of high class crop land left. All but about 100 million acres of that total are subject to erosion.

Of these 500 million acres about one-fourth is now being damaged by erosion at a critical rate. Another fourth is being eroded less rapidly but still seriously. The third fourth is suffering from deterioration at a slow rate, and the remaining fourth is suffering mainly from a decline in fertility.

It seems clear that we cannot long maintain our present standard of living if we continue to destroy land as rapidly as we have since 1800. We will have to change our ways. Some 500 thousand acres of crop land are lost by erosion each year. An average cultivated acre yields from \$15 to \$50 in newly created wealth each year. Over a century the return from an acre would be \$1500 to \$5000 — and that acre would still be on the job producing wealth. Multiply, if you will, this present acre return by 500,000 and you will see what our annual loss of productive crop land means to our American economy.

It has often been said that our civilization rests upon about six to nine inches of topsoil. Destroy that layer and we destroy the "land bank" on which our farm economy depends. Every acre of ruined land is a share of bank stock thrown away. We have already thrown away about 100 million shares of our land bank stock — which in one year means about 4 billion dollars of potential wealth cut off.

The present status of our range lands offers an equally dreary picture. Basically it is a matter of too many animals on too little land for too long a time. The total area suitable for grazing is decreasing every year under the existing range practices.

Some 630 million acres in the United States — one-third of our land area — is primarily useful as forest land. About 460 million acres, or one-fourth of our land area, are commercial forest land. Does that mean it can produce wood products indefinitely? Unfortunately the answer is no. Too much of our forest land is poorly managed. For example, we are not able by a wide margin to produce the saw timber we need in this country.

Despite a tremendous cooperative educational campaign, forest fires continue to ravage our woodlands. There was a good deal of justified back-slapping about the improved forest fire record — then came the fall of 1952 and its terrifying holocausts. It is pathetically apparent that far too many of our citizens leave at home any sense of responsibility which they may have when

they go into the out-of-doors. Burning forests and littered camp sites and roadsides offer irrefutable evidence.

Now we have talked a little about soil and have taken a quick look at our forests. What about water? I will not dwell on this subject because of the excellent film, "The Living Water Series, by the Conservation Foundation which we will see this morning. An important thing to keep in mind is that the way we treat our soil and forests determines to a considerable extent what happens to our water resources. The next time you see muddy water swirling along, look beyond the particles of soil and envision the loaves of bread, beefsteak, and good green vegetables that are floating by on the current. Our soil fertility is going downstream and the crops which it might have raised are going with it.

I would like to talk about wildlife at great length because of my own personal interest in it. Time does not allow, however, so let's hit a few highlights.

Nature hobbies are tremendously important in helping us to understand the world we live in. The thousands of amateurs who go to the woods and fields as nature hobbyists cannot help but absorb some ecology, regardless of whether they recognize it as such. It must be admitted, though, that among the general public there is tragically little knowledge of ecology, of the interrelationships that exist among all living things in the out-of-doors. If this were untrue we would not witness the needless persecution of wildlife which takes place on every side of us. Far too many of us insist upon foisting our human moral standards upon the creatures of the wild. We still look upon death by predation as "murder" and seem to fail to realize that if there were not billions of murders a day among wild creatures, the wildlife community could not function. Predation is the way of life in the out-of-doors, but we seem unwilling to reconcile ourselves to its inevitability.

Dr. Paul Errington has pointed out that when a hawk swoops upon a cardinal, it is not succumbing to temptation but simply eating a meal. That reminds me of one of my favorite true stories about ecology. It concerns the farmer who noted that wood ducks no longer used his pond. He asked practically everyone in town, including the biology teacher, if they could explain why the wood ducks had left. All of the necessary clues to solve the

mystery were present in the environment of that pond, but no one knew enough about ecology to piece them together. Finally a well-known conservationist from out-of-town answered the farmer's plea for information. He visited the farm and came up with the answer — the farmer's son had bought a new bicycle. The logical question now, of course, is what has a bicycle to do with wood ducks? Here's the story. The farm boy needed money to buy his bicycle so he trapped skunks. In his fervor to get money he trapped all of the skunks in the neighborhood. It so happens that by eating snapping turtle eggs, skunks constitute one of the important controls on the turtle population. It is well known that snapping turtles have a weakness for ducklings. Putting two and two together we find that the wood ducks lost all of their broods to snapping turtles for several years in a row and left to find another home site, so you can see that farm boys, skunks, bicycles, and wood ducks are inter-related after all.

WHAT CONSERVATION MEANS TO OUR CITIES

We've been discussing briefly the significance of conservation. Since we are meeting in a city and most of us either live or work in a city, let us ask the question: What does natural resource conservation mean to our cities?

I am sure you have heard it said that natural resources are the basic wealth of the nation; but that is a generalization and doesn't hit home very hard, does it? We all work in some way, so let's pin this conservation business down to jobs. If grazing lands are worn out, the wealth of sheep ranchers is destroyed — that would threaten the job of Bill Jones who operates a sewing machine in a men's suit shop on lower Broadway.

Here in New York we can see very clearly just what it would mean if our natural resources were to dwindle away. We New Yorkers live on islands and we count on an uninterrupted flow of raw materials to keep us alive and at work. What happens to the rest of the nation is tremendously important to us, more so than to many more self-sustaining communities. For one thing we have numerous central offices of great businesses here. The loss, in Montana, of resources on which these businesses depend can be felt with lightning-like rapidity in New York City.

New York is the greatest manufacturing center in the nation. We say our city is healthy if people have jobs, and we should not forget that those jobs depend upon a continuing flow of raw materials. No New Yorker is self-sufficient.

Manufacturing is the most important activity in our city. More than 40,000 factories employ about 1 million people and have a payroll of almost 3 billion dollars. Making clothes occupies more New Yorkers than any other manufacturing activity. Do you realize that some 370,000 people go to work every day in the garment district? Printing and publishing is next in line with 100,000 employees.

Trade is our second most important activity. This includes our department stores and shops, which function as retail trading centers for many parts of the nation.

Failure of raw materials creates immediate problems because of our specialization. In the millinery business, for example, each street is specialized according to the price of its product. Believe it or not, a 38th Street worker doesn't know how to make a living on 37th Street. The danger of specialization is the individual worker's dependence upon the availability of the particular raw material which he uses. In this greatest of all metropolitan areas we should be especially aware of our role in the guardianship of our natural resources.

The water shortage did more than anything else to make us aware of the importance of that resource. Many New Yorkers discovered for the first time that water doesn't come from a tap. It seems likely, however, that far too many of us still think that milk comes from a dairy or carrots from a grocery store. We need to become aware that a shortage of any resource — whether from misuse or waste — can be a threat to our community.

NATURAL RESOURCE CONSERVATION AS RELATED TO NEW YORK CITY

Now that we have discussed what conservation means to a city, let's see if it can be applied within a city. Do cities have to be all concrete and bricks? The answer is no, but far too often that is their fate unless there is some far-sighted planning. Nature-minded people should make their wishes known. If we want wild areas set aside we've got to stand up and say so. Let me tell you the story of Mother Lake in Minneapolis. It is an area of

more than one thousand acres of marsh pools, and it is entirely within the city. In fact, a busy highway bisects the marsh. A student can feast his eyes on yellow-crowned night herons, gallinules, and other birds that are not easy to find in a city.

One day the Minneapolis paper announced that a big marsh was to be drained and that it would be replaced by a parking lot. Many people thought this was a bad decision. What good is a marsh, they said. What good are quitoes? Those who appreciate a marsh, however, without equal, knew that the manicured parking lot would be a sorry substitute for the natural area so attractive to wildlife. So the Audubon Society decided to dramatize the value of Mother Lake by an "open house" on a Sunday afternoon. Many people came and see for himself the remarkable area which made its home at Mother Lake. Bird-watching groups were on hand with spotting scopes. Everyone wondered whether the hoped-for parking lot. They came all right, hundreds of them. There were paper photographers and reporters. Their stories spread across the front pages and many newspapers covered that it had a community asset in its back yard. Some years ago, and I am happy to say it was not drained and that it is still in its natural state. "Mother Lake museum" within a great city.

Recently I had the privilege of visiting a park in Connecticut, at the time of a field trip for the Connecticut Bird Protective Society was host. We visited three wildlife and plant sanctuaries which were maintained. These sanctuaries are not huge but they contain a variety of habitats, and the wonderful thing is that the people of New Canaan will be able to enjoy a bit of wilderness where nature may be enjoyed. In a few communities have been so foresighted as to turn it up hand over fist to the developers, and the realization that something of real value has been lost can never be replaced.

How valuable a park or a little garden

demonstrated by Central Park in Manhattan. I suppose it is safe to say that a number of the fiscal problems of the city could be solved if the park were sold to private real estate interests. Yet no one dares to make such a suggestion because New Yorkers have affection for their oasis of greenery and would shout down anyone who had the effrontery to suggest that it be destroyed.

Central Park is, of course, manicured, but its intensive use makes that almost inevitable. The only real exception is an area known as "the ramble" where there is a considerable amount of brush and where more or less natural conditions can be found. It is significant that this is the section which bird watchers frequent because of its great appeal to migrating birds.

The project to make Jamaica Bay a sanctuary is an example of planning for wildlife. If it can be brought to fruition it will be a great asset to New York. The total area involved is about 12,000 acres. Plans include building dikes to create impoundments, planting shrubs and trees to attract wildlife, transplanting eel grass from Great South Bay, destruction of rats on the islands, and creation of foot paths around the impoundments so that the public can view the birds and other wildlife. From the information which is available to me I can only conclude that to date there has not been a great deal of progress toward these objectives. The old problem of finances is apparently a crucial one. Everyone who senses the importance of this project should make certain that his feeling about it is made clear to those who have it in their power to retard or advance the undertaking.

Every city should plan for a demonstration sanctuary where education of children and adults in nature and conservation is the prime purpose. I am sure that most of us would like to preserve in a wild state as much of Staten Island as possible. Realistically, however, we would have to admit that it could not be done for long. With the sort of expansion that seems to be going on in this borough of a large city, we cannot expect that vast tracts will be set aside in perpetuity for the sake of wildlife — at least not in the same manner as in a more rural area.

However, this does not mean that Staten Island must accept a fate which would condemn it to the same sort of development that has left Manhattan, Brooklyn, and the Bronx mostly mazes of steel, concrete, brick, and hard, unproductive soil. There would seem to be no reason why Staten Island could not

be maintained as a region of many one-family homes, with gardens and shaded streets, parks and recreation areas, lakes, ponds and streams. It would be especially desirable if one fairly sizable area could be set aside in its natural state as a permanent sanctuary for the plant and animal life of the island.

Most of these objectives pertain more specifically to the field of city planning than to conservation, but they are all part of the same picture. To achieve all of this is a big job and will demand the efforts of all citizens over a period of many years.

The development of a demonstration nature sanctuary is a project that seems well suited to the interests, abilities, and purposes of the Staten Island Museum. The importance of the undertaking lies, not so much in its character as a wildlife preserve, although that is important, as in its development as an educational center. Staten Island is becoming a large city and you are faced with the problem of teaching a love of nature and the lessons of conservation to children as well as adults who don't learn automatically through first-hand contact. Good work can be done in the classroom and lecture hall, but the most effective job of all can be accomplished only in the out-of-doors where the pageant of life can be observed in all of its variety. This means that some tract should be set aside and maintained in a state as nearly approaching the wild as possible. Nature trails could be laid out and the area would be an outdoor classroom for your young and adult citizens.

To achieve this you need a suitable area. In recent weeks I have had the privilege of visiting a 53-acre tract in the New Springville area, which was set aside many years ago as a bird sanctuary. From the standpoint of variety of terrain, location and tradition, it would seem to be an excellent site for a demonstration nature sanctuary. A considerably larger area is needed, if the sanctuary is to achieve maximum effectiveness, but fortunately the city owns the property surrounding the present bird sanctuary, so it would seem that arrangements might be made to establish an expanded area with relatively little difficulty. Money will be needed to finance the sort of educational work that is envisioned for this demonstration sanctuary, but the end result will be well worth the cost, and I hope that all of you who are interested in nature and conservation will unite your efforts so that the project may become a reality.

It is important that conservation not be treated as a generality. It must be brought down to a city and individual level. You Staten Islanders have a great opportunity to work together for the development of a nature and conservation demonstration area. In doing so it will be well to keep in mind Theodore Roosevelt's admonition, "There is nothing more practical in the end than the preservation of beauty."

Many people ask "How can I aid conservation?" In addition to working on projects such as the one just described, you can join and thereby support those organizations which are working to advance the conservation of our natural resources. When asked to contribute to a fund for broken down horses or the relief of orphans in Kansas, I explain that there are a number of conservation causes which command my support. Since that support must be limited anyway, and since most of these conservation organizations are poorly financed, I make it clear that for the most part I have to confine my aid to these groups. We are all interested in conservation, and yet I dare say there are relatively few of you here today who are members or otherwise support the Wilderness Society, the Nature Conservancy, the National Parks Association, the Izaak Walton League, the National Audubon Society, and others. Tragically enough, all of these organizations are inadequately financed, some more so than others. Consider, if you will, that the largest college endowment in America is in excess of \$200,000,000. The largest endowment of a conservation organization is less than \$2,500,000. I think it can rightfully be said that no important cause in America is so poorly financed as the conservation movement. Yet, as we have already seen, conservation or lack of it vitally affects our national economy today and may well determine to a considerable extent what our role in the world community will be tomorrow.

WHAT DO WE HAVE AND WHAT DO WE WANT?

PAUL B. SEARS

I am pinch-hitting for Louis Bromfield, who was to talk to you tonight on *The Revolution in Conservation*. Whether your invitation to take his place is a supreme mark of confidence or a sheer act of desperation makes no difference. In either event I am glad to be here and see still another facet of the problem of growing urbanization, with its conflicts of needs and interests, and the inevitable limitations imposed by nature upon the plans of men.

Let me first pay my respects to the eminent publicist and preeminent farmer who could not be here. As a neighbor, I have watched Malabar Farm from its inception and have nothing but admiration for the skill and imagination with which it has been developed. I have seen, too, the tireless generosity with which its owner has thrown it open to throngs of other farmers and explained the ideas behind it. Even city-folk are welcomed.

There are many approaches to the idea of conservation. It is scarcely too much to say that whatever one's interest in life may be, if he thinks it through honestly and persistently, he is likely to come out realizing that man must treat his physical surroundings with prudence and respect, or pay the penalty. To the accountant, conservation simply means preventing the depreciation of the capital structure which is the source of all wealth. To the biologist it means respect for the great balance of nature. To the artist it means preserving the beauty of health and harmony in the landscape. To the moralist it means obligation to the future. The historian cannot interpret the past unless he understands the destiny that binds men and nations to the material world, nor can the statesman interpret the problems of the present without this knowledge. A realistic understanding of it might have prevented our tragic war with Japan, and would help greatly in our present foreign relations.

One can speak fairly of a revolution in conservation. In the beginning this continent seemed so endlessly rich that any one could help himself, and so everyone did. This was the period of exploitation, and engineers still speak of the exploitation of

mineral deposits without any evil intent, although the more sensitive are beginning to use the word "development."

Presently we entered a second phase which had its modest start about the time of the Philadelphia Centennial in 1876. Here and there a few scientists, foresters, and tree-lovers, sportsmen and naturalists, began to be concerned about particular resources in which they were interested. Gradually measures were taken, feeble and ineffective at first, some forests and parks set aside, hunting and fishing restricted. This movement gathered strength, however, and came to a dramatic head in the rip-roaring days of Roosevelt I, with checkered but fairly steady progress thereafter.

Suddenly we hit the '30's and distress in the midst of what had been plenty. Along with this we had natural disaster — drought and dust — to remind us that man does not have the last word. We became conscious of the destruction of our soil through improper use, and began to realize for the first time that the waste of resources was something more than a matter which concerned the individual who managed a particular resource.

The national mood at the time was one of near-despair. Utah, accustomed under the Mormon dispensation to face and solve its own problems, was an important exception. Another was the group of hill-people of the Ozarks. But for the great majority of Americans the chief source of hope seemed to lie in a then buoyant federal administration. It was natural, then, to think that the road to better management (i.e. conservation) led to Washington and thence back to the seat of trouble. Even today it is not uncommon to have people ask, when they first begin to see the need for conservation, "If it is as bad as that, why doesn't the government do something about it?" It was precisely this mood which led us to disregard the warnings of our best journalists as to what was going on in Japan and Germany at the time. Assuredly, we thought, if these reporters were telling the truth, "the government would do something about it."

Under the federal aegis, some spectacular and rather magnificent things were accomplished, along with a number of dreadfully stupid and wasteful things. Almost unnoticed, the seeds of a different approach were being sown — notably in the Soil Conservation District laws. These made federal help possible, but only to those communities which undertook to help themselves.

This brings us to the fourth, and current phase of the

revolution in conservation — the idea that problems dealing with natural resources ought to be faced and solved, so far as possible, by the people who are immediately concerned — that is, the local community. The pattern had been set long before in Ohio, under the administration of Governor James B. Cox. Following the disastrous floods of 1913 the Miami Conservancy District was organized, the services of Dr. Arthur E. Morgan secured, and effective measures planned, executed, and paid for by the District.

Today, throughout the nation, this idea is reviving. Water, soils, forests, fish and game, zoning, in fact all of the aspects of conservation are being studied and, so far as possible, dealt with at the local level. Most significant is the changing attitude of responsible business, industry, and finance, interests which traditionally wanted to be left alone to make as much money out of natural resources as the traffic would allow. Today they are increasingly concerned with the idea of permanence and stability, which can be had only by taking care of our resources and conserving the capital wealth of the landscape, which is the source of all wealth. No longer are these great economic institutions fighting back, or even dragging their feet. With few exceptions they are moving out in front.

Mr. Bromfield is correct, therefore, in speaking of the revolution in conservation. In reality, it is simply the carrying out of the only truly revolutionary idea in the world today — an idea which had its beginnings in Puritan England and its greatest political expression in the establishment of our own country. Based upon a still older notion, that of the spiritual dignity and importance of the individual, it extended that idea to social, economic, intellectual, and political dignity.

The real test of any revolution is not whether it claims to love and befriend the common man, but whether it trusts him to help shape his own destiny. The spiritual dignity and importance of the individual is sustained not so much by emphasizing his privileges as by insisting that he meet the obligations which go with privilege. As Lincoln said long ago, a duty delegated is a freedom lost. That is why I personally welcome the present trend in conservation, throwing responsibility as it does back into the communities which have problems to solve.

Even if I could be shown that our resource problems could be most neatly and effectively solved by central govern-

ment (which is debatable at best) I should, as a matter of political health, prefer the slower and clumsier route. On this, of course, every one is entitled to his own opinion. I merely give my own.

In a sense, the basic resource is one which is seldom mentioned, and perhaps it is the one most in your minds. That resource is *space*, space in which to work, and live, and enjoy living. Since we cannot stretch the surface of the earth, we have to tackle the problem in another way. You have observed that two neighbors can each have a lot, or a living room, with the same dimensions. One will seem crowded to suffocation; the other gives an impression of generous space. The difference is obviously not a matter of square feet, but of the human qualities which determine the way in which space is used.

Until about 1900 the United States was predominantly rural. Since then the urban population, still growing, has been in the majority. I need not remind you of the many problems — recreation, delinquency, waste, decay of old centers, traffic, and so on — with which the city must deal. These are all related to the way in which space is used. Allow me merely to recommend to you two books, *The Culture of Cities* by Lewis Mumford, and *Cities Are 'Abnormal* by Elmer Peterson, as a beginning. Mumford loves the city, Peterson does not, but this is as it should be, for one never gets the whole truth either from friend or enemy alone.

As you read and, I hope, reflect upon your own immediate problems, you will come to see that the problem of space is at heart a problem of design. We think of this as the problem of the artist, and so in large measure it is. But if you know any successful firm of architects, whose business of course is to design, you will find that the artist there works shoulder to shoulder with the engineer and business man, and even the lawyer.

Here is your clue. Your community has in it — as every community of size does — a rich array of talent from all the occupations, arts, and professions. Each of these individuals is also a free citizen, with duties as well as rights. Each has something to contribute to what will be the ultimate design of the place in which you are spending your lives. Most of them, when they see what is to be done, can be counted on to help.

The process is as simple — and as difficult — as the plan-

ning of a home. What do you have and what do you want? A lot of cold physical facts about your local geography have to be dug up and put into shape so they can be understood. So too do a lot of not-so-cold social and economic facts having to do with conflicts of interest.

The same section may be equally desirable for residence or recreation because of its beauty, or for industrial expansion because of its convenience. Either type of use is legitimate and entitled to consideration. Too often such conflicts are settled by out-stealing, out-bidding, or out-slugging the loser, but I suggest that this is not a very civilized procedure. In my experience, a surprising number of such problems can be solved by getting the facts out where they can be seen and then working together in good will toward a solution. No industrialist in his senses today wants a factory so placed that it leaves no fit place for his employees to live.

As your citizens gather facts, learning what they have to work with and what kinds of needs must be met, the second phase of the problem should begin to clear up. What do they want? Or better, what kind of a place do they want this to be? It may be difficult to agree on matters of taste. It is not impossible, or skirt hems would not move up and down so unanimously throughout the Western World. It is less difficult to agree on matters of principle, if the principles are sound and clearly stated. Once established, matters of taste are likely to fall in line.

And finally, lest you think I have forgotten to be practical, speak to your friends who have visited Holland or Denmark. Both countries are a delight to the eye, yet both have had to work with the most severe limitations of space and wealth. Both exhibit harmony of taste, and harmony between taste and principle, because there exists an unspoken meeting of minds as to what is desirable and good.

For the town or village as for the home-owner, for the nation as for the city, then, the decisive question is *What Kind of Place Do We Want This To Be?* When the answer to that question begins to take shape in our minds, the problems of conservation will be well on their way towards solution.

RECENT ACCESSIONS TO OUR PAINTING COLLECTIONS

GERALD BERNSTEIN

Our Museum has recently acquired five paintings, three of which are valuable additions to our permanent collection of regional art. Although the other two do not pertain to Staten Island, they are also fine paintings and as such are welcome additions.

The painting *Frogging* by Henry Schnakenberg, recently given to the Museum by an anonymous donor, is of great value to us from two important standpoints in addition to its obvious aesthetic worth. First, it shows the development of, perhaps, the major tendency in the artist's work, and secondly, it fits admirably in the tradition of American painting.

This landscape, an oil, has a quality which the French call *paysage intime*, that love of the simple life, of nature for its own sake, which characterizes Henry Schnakenberg's development and which describes American painting more completely than any other single attribute. It was painted in 1919 and is a scene of boys catching frogs on Shore Acres Pond, Rosebank, just as they do at the same pond today. It is painted in large masses with colors in broken patches here and there to give the effect of sunlight. Simplicity and freedom from affectation characterize this early painting just as they do the artist's more recent work. *Frogging*, like all of Schnakenberg's paintings, is an individual record of something seen and enjoyed, a fact especially evident in his landscapes, which more than anything else show his genuine love of the country.

There is less evidence of influence by individual artists on Henry Schnakenberg's work than there is of a tradition into which it fits. One thinks of the American genre painters of the eighteenth and nineteenth centuries, of children at play painted by Winslow Homer and Thomas Eakins, and of the landscapes of the Hudson River School. That is to say, Schnakenberg's paintings have the same quality of depicting the everyday world in clear light and with a lack of sentimentality and a freedom from affectation that we find in earlier American painting.

We find in our example an occasional analyzing of color

to show the effects of sunlight on objects that gives it a slight similarity to Impressionism. However, form is more clearly defined, and there is less of the feeling of the transitoriness of nature's effects than we usually find in the works of the Impressionists. It is in the definition of form, of painting objects solidly in space, that we discover one of the principal aims of the artist. This is evident in *Frogging*, but the artist's more recent paintings naturally show more skill and craftsmanship than we find in our example, attesting especially to his ability as a careful planner and builder.

Schnakenberg was born in 1892 in New Brighton, Staten Island, and was educated at the Staten Island Academy. Although a few years of his youth were spent in the insurance business, he was able to commence his art studies, when he was twenty-one, by attending evening classes at the Art Students League of New York. The controversial Armory Exhibition of 1913, which introduced to America the work of Matisse, Picasso, Braque and others, gave him impetus to pursue painting as a career. At the League, he studied under Kenneth Hayes Miller, who trained many of our contemporary American artists.¹ After World War I, in which he served in the army in France, he resumed his art studies, and his career from that time to the present has been filled with honors. His paintings during the past thirty-five years have increased in strength along the path on which he set out at the time he painted our Rosebank landscape.

The *View of the Narrows* by William Frederick De Haas, presented to the Museum by Mr. Schnakenberg in memory of his mother, Elizabeth Gillespie Schnakenberg, is one of the most important oil paintings in our collection of Staten Island scenes. The artist probably painted it from Stapleton, or from a site near Stapleton, during the 1860's or 70's.

Our picture bears a similarity to Dutch village scenes, with grazing cattle, houses nestled into the earth, and two figures in costumes reminiscent of the Lowlands. It is entirely possible that the artist was attracted to the scene because it reminded him of his homeland.

¹ A recent exhibition at the Munson-Williams-Proctor Institute of Utica, N. Y., was devoted to the work of Kenneth Hayes Miller and prominent artists who were his students. From there it moved to the National Academy Galleries, New York City. Henry Schnakenberg's work was included in this exhibition.



The View of the Narrows. By William Frederick De Haas.

De Haas was born in Rotterdam in 1830. He was a member of an artistic family and began at an early age to sketch from nature. He studied at the Academy of Fine Arts of Rotterdam and was a pupil of Johannes Bosboom at the Hague. He left Holland in 1854 and settled in New York, where he accepted a position as professor of painting in a New York educational institution and was, for this reason, almost lost sight of as an artist. However, his interest in landscape painting never waned. His leisure hours were spent sketching out of doors, especially the sea coast, which he found beneficial after his health became poor. Becoming more and more enthusiastic with this subject matter, he gradually extended his painting tours. Finally, when he was able to retire from teaching, he turned his attention entirely to painting the coast scenery. During the last ten years of his life, he sketched along the Atlantic seaboard from Nova Scotia to Georgia. Although first reports stated that he died on a voyage and was buried at sea, later and more accurate accounts reported that he died on July 16, 1880, at Fayal in the Azores.

William Frederick De Haas never had so great a reputa-



1840
The Valley of the Rhine

1840
The Valley of the Rhine



1840
The Valley of the Rhine



1840
The Valley of the Rhine

tion as a marine painter as his brother, Maurice Frederick Hendrick De Haas, who settled in New York five years after William came. Maurice received great recognition and was made a member of the National Academy eight years after his arrival in New York, and he was also one of the founders of the American Society of Painters in Water Color. William Frederick, even though his fame was never great, did leave a record of our eastern seacoast which is of inestimable value. Our painting is a fine example of his work.

During the past year the Museum also received a portrait in oils of John Jay Crocheron, a member of one of the foremost families of Huguenot settlers who located in Staten Island in the latter part of the seventeenth century. He was a brother of Anne Crocheron, whose descendants, after her marriage in 1812 to David Latourette, lived in the Latourette House in what is now Latourette Park. John Jay Crocheron was the great-great uncle of Mary St. John Mairs, who, because of her family's traditional interest in the Museum, presented the portrait in the spring of 1953.

Neither the name of the artist nor an accurate date is known, but we may assume that it was painted during the first third of the nineteenth century. The popularity of portraiture in America was a direct heritage from England, for the English have always been patrons of portrait painting. John Singleton Copley and Gilbert Stuart, to name two, followed the grand style of portraiture, departing slightly from the English style by the greater sobriety and reserve which is expressed in their work. They had many followers, one of whom undoubtedly painted the portrait of Crocheron. With a manner and method derived from earlier American portraitists and the English School, it is a fine example of this art. Far more simple than the somewhat theatrical prototypes, this portrait has an air of austerity and reserve which marks it early American. It is a very welcome addition to our collection.

A portrait by Louis Priou of Helen L. Gray, formerly the Countess Dumas of Paris, was presented to the Museum through the Chase National Bank. The Countess had directed the bank, as executor of her will, to choose some suitable Museum in the United States that would honor the work of the artist. The Staten Island Institute of Arts and Sciences was selected.

This full-length, life-sized oil portrait was painted by Priou when the Countess was thirty-three years of age. It shows her seated on a carved wooden bench against a landscape background. She is gowned in a flowing diaphanous material, and she wears a tiara. The style of the painting is decidedly neo-classical. The Countess rests her head on her hand and gazes reflectively into space in a manner which reminds one of representations of the "Tragic Muse" or other mythological figures.

Louis Priou was born on October 16, 1845, in Toulouse. He studied under Gilbert and Cabanal, two of the foremost academicians of the time. Priou became a regular exhibitor at the annual salons of the *Société des Artistes Français*. His first work, a mythological painting of Hercules and Pan, was exhibited there in 1869. It was favorably received, the artist won a medal and the painting was purchased by the government. In 1870, another mythological scene *médaille 1^{re} classe* and was also purchased by the state. However, even with this success, he was not entirely happy with this type of work and he turned to decoration and portrait painting. Around this time he decorated the Hall of Commerce of Bordeaux and, in collaboration with Joseph Blanc, the *Opera Comique* and the *Hotel de Ville* in Paris. He was also a professor at *L'Ecole Nationale*. Today his works hang in Nantes, Vienna, Munich, Washington, Chicago, and Philadelphia.

Our portrait is interesting in that it shows how certain traditions carried over into the early part of the century and how other styles were coming in. The brushstrokes are loose and quick and bear resemblance to those of Sargent. The handling of materials, textures, and flesh tones are exceptionally fine, and the general scope and feeling reveal the artist's academic background.

Another noteworthy addition to our painting collection is *Rue des Barres* by Ogden M. Pleissner. Although this painting has no direct connection with our collection of Staten Island works, there is great value in our owning so excellent an example of the work of a prominent contemporary painter.

The Staten Island Museum was one of nineteen museums and galleries to be selected by the American Academy of Arts and Letters, at their most recent presentation, to receive the work of an American artist under the terms of the Childe Hassam

Fund. In 1935, the celebrated American impressionist painter, Childe Hassam, bequeathed to the American Academy many of his paintings and drawings to be sold from time to time to endow a fund, the income from which is now being used to purchase works of contemporary artists, which are in turn presented to art galleries and museums by the Academy.

Although there are many fellowships and prizes for artists, the fund is notable in one respect. It gives the artist the supreme satisfaction of selling his work and also of seeing it exhibited in a museum during his lifetime. Behind Childe Hassam's simple bequest lay the sympathy, knowledge, and understanding of a man who had once been a young artist struggling for recognition. The benefits of the Hassam fund do not accrue to the artist alone but also to the many museums all over the country that struggle valiantly on small budgets to serve as cultural centers for their communities. To such museums the presentation of the works of recognized contemporary artists is of inestimable value.

Our painting by Ogden Pleissner, a watercolor, is a fine example of this well-known artist's style. The medium is used to great advantage in all respects. The watery effect of the wet street, the texture of the brick and stone, the transparency of the light, the clean contrasts, and the color attained by a simple use of greys and blue should be a delight to everyone visiting the Museum.²

Ogden Pleissner was born in Brooklyn in 1905. His career has been dotted with honors, starting in 1932 when the Metropolitan Museum bought his painting of Brooklyn backyards. Since that time he has received many awards. His paintings are realistic enough to satisfy the nature lover and sound enough to arouse the admiration of the critic. His work has reminded many critics of Winslow Homer. Color, form and design give him incentive to paint. There is never anything hit or miss in his work. His procedure, a good example of which can be found in our painting, is always logical, his observation orderly, and every feature consciously analyzed and organized.

We have the nucleus of a fine collection of paintings, to which we are eager to add. Gifts of paintings, of course, are

² Unfortunately we do not have enough gallery space for permanent exhibition of our collections, but we follow the rule, when possible, of displaying selections every year or so.

gratefully appreciated, but we cannot depend entirely on gifts. In order to expand our scope, we must first decide what to collect and then how to finance our purchases. Museums of our present limitations must, by necessity, confine serious collecting either to the work of a geographical region, to some area of thought, or to some other segment of the artistic world. Perhaps it is most logical that we choose geography and concentrate, at least to begin with, on the New York region. This, it seems to me, would assure us the necessary love and pride of our community, both so important in forming good collections.

There is no doubt in my mind at all that we should acquire paintings pertaining to Staten Island, but the scope of our collections might in time be expanded to include the Hudson River School, American "primitives," or even American art of this region in all its periods. This does not mean that we would not welcome good examples from other periods and other schools of art, but since we have no means and no desire to compete with the great museums of this area in building up general collections we should adopt as policy a plan of the sort just outlined.

One of our greatest needs at present is the financial ability to purchase scenes of Staten Island whenever they become available. Too often fine paintings which we should have in our Museum are placed on the market only to disappear into private collections. It was only by great good fortune that we received such valuable paintings as the De Haas and the Schnakenberg. A fund should be set up for the purchase of other such paintings. As a museum we owe to our community the duty of collecting and preserving the works of art of the past so that we may, by presenting them to the public, guarantee to that extent a rich and rewarding future.

ERRATA

We made not only one, but two errors in the *Proceedings*, Volume 15, Number 1, Spring 1953.

The middle of page 5 of the article "Oil Means Death To Ducks" by Howard Cleaves should read: "At Prince Bay I watched two horned grebes, an oldsquaw duck, a golden-eye or whistler and a white-winged scoter — all up on the beach plucking at their oily plumage. Charles Pearson and I saw scaup ducks on the beach at Richmond Valley, many of them dead, others barely alive but too weak to escape or even move at our approach."

On pages 33, 34, and 35 of "From A Diary of 1913" by Ida Dudley Dale, the name should be Senator Howard R. Bayne.

SCIENCE NOTES

ROBERT MATHEWSON and LEE A. ELLISON

Recent heavy infestations of the elm leaf beetle, according to Edwin A. Rundlett, Arboriculturist of the Park Department, have been observed on Staten Island. The Dutch elm disease is particularly prevalent here, and it is possible that there are no elm trees left which have not been contaminated.

In the October, 1953 issue of *Trees Magazine*, a publication for professional arboriculturists, Mr. Rundlett is given credit for exposing leaf fires as a possible, predisposing factor in the presence of canker. Dr. P. P. Pirone, pathologist of the New York Botanical Garden, worked with Mr. Rundlett in exploring this theory and making a more intensive study on the Island.

The following addendum to the paper *A Study of the Grass Flora of Staten Island* (*Proceedings*, Volume 14, Spring 1952) has been submitted by the author, Robert C. Meyer. "Since the printing the grass known as jointed goat grass, *Aegilops cylindrica* Host., has reappeared, this June, in considerable quantity at the same location." Other grasses to be added to the list (pg. 15) are: *Panicum Ashei* Pearson, *Aristida oligantha* Michx., *Puccinellia distans* (L) Parl., and *Bromus inermis* Leyss.

Lee A. Ellison reports that recent commercial exploitation of the peat deposits along Fingerboard Road, Grasmere, has given us an opportunity to study Staten Island peat. This is an unusual opportunity because, aside from the deposits along the beaches influenced by salt water, the Grasmere Bog is the Island's largest accessible deposit.

Four noticable features in these deposits are: (1) A fibrous, light brown layer, about a foot thick, uppermost and presumably most recent. It contains some unbroken and unaltered plant remains. It is 97.6% combustible, leaving only 2.4% ash, which is now undergoing analysis. There is considerable fine white sand in this layer. (2) A layer varying in thickness from one to three feet, dark brown to black, crumbly, glossy

to dull, showing no distinguishable plant remains. It is 95% combustible but too dense to carry a flame readily. Its approximate 5% ash has the following analysis: silica (2.52%), iron oxide (1.65%), alumina (.23%), calcium oxide (.57%), magnesium oxide (1.21%), copper oxide (.008%), zinc oxide (.038%), nickel oxide (.06%), manganese oxide (.007%), nitrates (.77%), phosphates (.06%). The small percentage of nitrates and phosphates indicate little value as a fertilizer. (3) A layer of uncertain location, apparently of recent formation and possibly derived from rainwater leaching the recently exposed peat. This layer contains 30% combustible material and 1% phosphoric acid — a much higher amount than is found in either of the other two forms of peat. The cracks, and the densely warped layers, of an inch or more thickness, remind one of the mud deposits in the Clay Pit Pond area. (4) Whitish lumps and discontinuous strata of clay-like material are composed of about 75% fine white sand and 25% true clay (kaolinite). No flakes of mica were found; these flakes are characteristic of the clay deposits at Arthur Kill Road and Huguenot Avenue.

Mr. Ellison's conclusion, based on incomplete study, is that sphagnum moss has been the most active agent in forming the deposit, which probably in no place exceeds a depth of over 15 feet.

As a result of his walks to study the ecology of disturbed soil in the strip of land beneath which the natural gas pipe line was laid two years ago from Mariners Harbor to Rosebank, Lee A. Ellison has reported the occurrence of significant plants. Common dock appears, often in a straight line, just above the gas pipe. Very little poison ivy has found its way into the disturbed soil and was observed only near Reed's Valley. From the latter area eastward to Rosebank, greenbriar is sparsely established. Only accidental survivals of moss are to be found — the only species being *Aulacomnium palustre*.

Robert Mathewson is engaged in extensive research on Staten Island mammals. He points out that the sources of material in work of this sort are sometimes quite diverse and frequently difficult to obtain. Specimens may come from the mouth of a

hunting cat or from the excited housewife who offers a household pest she may have trapped. Since it is the nature of mammals to be secretive, it is only through diligent search, luck, and the kindness of a few people that specimens are brought to light. The Curator of Science thanks those who have helped him thus far and wishes to encourage others to send specimens or report their presence. Some of the rarities reported are the least weasel, raccoon (tracks), white-tailed deer, and a possible fox. When research is complete a paper on this subject will be published in this magazine.

The Birds of the Belgian Congo, Part 3, by Dr. James P. Chapin, has recently been published by the American Museum of Natural History. Dr. Chapin is Research Associate in African Ornithology of the American Museum, and President Emeritus of the Staten Island Institute of Arts and Sciences. Dr. and Mrs. Chapin are now in the Belgian Congo for further research.

An outstanding accession recorded by the Science Department this year, was the bequest made by the late James R. Gillin of Ambler, Pennsylvania. Mr. Gillin, a friend of the late William T. Davis, was a nursery-man who had a hobby of collecting birds' eggs and nests. A large part of his collection was offered to us but, because of lack of space, we selected ten clutches of eggs, and ten nests only. These additions are valuable towards completing our collection of Staten Island birds that have been recorded as nesting here.

Reports on the twelfth annual Breeding Bird Count were made by Casimir Redjives, Chairman of the Bird Committee of the Section of Natural History, Miss Mathilde P. Weingartner, and Howard Cleaves. The following list, which is also recorded at the National Audubon Society, indicates all birds seen on Staten Island during the breeding season. This includes those definitely known, on the basis of observation of nests or young, to have nested and also those about which there is doubt.

Green Heron
 Black-crowned Night Heron¹
 Mallard Duck
 Black Duck
 Blue-winged Teal²
 Wood Duck
 Sparrow Hawk
 Ring-necked Pheasant
 Clapper Rail³
 Piping Plover
 Killdeer Plover
 Woodcock
 Spotted Sandpiper
 Great Black-backed Gull¹
 Herring Gull¹
 Laughing Gull¹
 Least Tern¹
 Mourning Dove
 Rock Dove
 Yellow-billed Cuckoo¹
 Black-billed Cuckoo
 Screech Owl
 Whip-poor-will
 Night Hawk¹
 Chimney Swift
 Belted Kingfisher
 Flicker
 Downy Woodpecker
 Kingbird¹
 Crested Flycatcher
 Phoebe
 Alder Flycatcher⁴
 Wood Pewee
 Prairie Horned Lark
 Tree Swallow
 Rough-winged Swallow
 Barn Swallow
 Purple Martin
 Blue Jay

American Crow
 Black-capped Chickadee¹
 White-breasted Nuthatch
 House Wren
 Long-billed Marsh Wren
 Catbird
 Brown Thrasher
 Robin
 Wood Thrush
 Bluebird
 Starling
 White-eyed Vireo¹
 Red-eyed Vireo
 Blue-winged Warbler¹
 Prairie Warbler
 Yellow Warbler
 Ovenbird¹
 Northern Yellow-throat
 Yellow-breasted Chat
 English Sparrow
 Meadowlark
 Red-winged Blackbird
 Baltimore Oriole
 Orchard Oriole
 Purple Grackle
 Cowbird
 Scarlet Tanager
 Cardinal
 Rose-breasted Grosbeak¹
 Indigo Bunting
 Goldfinch
 Towhee
 Sharp-tailed Sparrow
 Seaside Sparrow
 Chipping Sparrow
 Field Sparrow
 Swamp Sparrow
 Song Sparrow

¹ These birds were not definitely known to have nested on Staten Island.

² Howard Cleaves recorded that two blue-winged teal of indeterminate plumage were flushed from a small water spot in the Great Kills Park area in May. There was no proof of breeding, but the repeated presence of this species on the island into May stirs speculation. A report from Miss Weingartner indicated that a pair of teals, male in full plumage, was seen in the pond at Great Kills Park. The birds were seen often from early May through the middle of June. Many times the female acted as though reluctant to leave the nest, eggs, or young, but none of these was actually seen. She swam a short distance into the pond, and remained there, keenly aware of the observer. These ducks have been reported in this same area since 1949. The courting antics were observed here about May 25th.

³ Casimir Redjives reports the clapper rail as having been previously observed (1949) nesting at Oakwood Beach before construction work at the Great Kills Park began.

⁴ For several years it has been suspected that the alder flycatcher was nesting on Staten Island, but this is the first actual find of the nest, eggs, and parent birds. On July 25th, at New Springville, Miss Mathilde Weingartner observed the nest with the female sitting on three eggs and the male singing in a nearby tree.

BOOK REVIEWS

The Wonderful World of Insects. By Albro T. Gaul. (Rinehart & Co., 1953. \$4.00).

Albro Gaul combines his capacity for observing the complicated activities of insects in the field with a considerable knowledge of electronics, and flavors the whole with an unexpected sense of humor, even including puns. His latest book contains a tremendous amount of information that he has been collecting through years of research and observation. This has been assembled coherently and told delightfully for the benefit of readers too busy with other interests to be able to acquire it for themselves.

Doubtless the book should be read in sequence from beginning to end; but the chapter headings are provocatively printed on the back of the paper cover. For instance, one can hardly keep from turning immediately to the chapter on "The Eight Senses" since many of us do not enjoy full possession of even five.

Unfortunately the book has one drawback, an index so limited as to handicap its use as an entomological reference work. The reference librarian and the editorial or entomological researcher needing to use the great amount of detailed data stored in the book would have to have a photographic memory to rediscover where each item was recorded. Perhaps a future edition will remedy this weakness.

From the typographical point of view the book is interesting because it is the first volume composed with the Higonnet-Moyroud photographic type-composing machine, called a Photon. The use of the new process is expected to reduce considerably printing costs of the future and should be welcomed by both authors and publishers.

Altogether, this volume is a splendid addition to the rapidly growing list of non-technical books on insect life, useful to the working entomologist as well as to nature enthusiasts of all degrees.

JOHN C. PALLISTER

The Scientific Adventure: Essays in the History and Philosophy of Science. By Herbert Dingle. (Philosophical Library, 1953. \$6.00).

With the founding of the Department of History and Philosophy of Science at University College, London, in 1923 — to the Chair of which Dr. Dingle was appointed in 1947 — a long neglected branch of learning came to rebirth, one now solidly entrenched in academic circles and currently attracting lively interest within a growing segment of the reading public. The abrupt flowering of this Cinderella of the disciplines doubtless can be explained in terms of society's need for a unifying force within the sciences, one capable of giving direction to the onrushing and sometimes fearsome events of technology.

As recently pointed out on this side of the Atlantic by Harvard's great George Sarton and now confirmed by the essays of Dr. Dingle, the likeliest starting point in the search for the desired control may well be found in the history of science. "The history of philosophy," observes Dr. Dingle, "in the narrower sense of the word, is the history of philosophy, but the history of science *is* science. Scientific workers may forget this and reach positions of highest eminence. Such a one may achieve much of value — but he is also a potential danger."

The opening essay of Professor Dingle's volume makes a plea for a critical effort within the scientific movement itself. "Whereas Greek tragedy had its Aristotle as well as its Euripides . . . we look in vain for corresponding names in science." The remaining chapters of the volumes are addressed to this theme.

Dr. Dingle is not an historian. Accordingly his prose flows smoothest when concerned with discourses in the field of his specialization: physics. An eclectic positivist, he denies significance to that which is unobservable, physically or logically. He classes ethics and religion as scientifically illegitimate, the former because the evaluation of acts as good or evil is a function of motivation, an unobservable, and the latter because it proceeds similarly from a priori premises. But he admits the reality of, and practical need for, religious and ethical experiences.

He ascribes the current paradoxes of science to confusion, by the scientists themselves, of observable experiences with unobservable postulates. Abstractions such as the heavenly spheres, phlogiston, ether, gravity and the electron tend, in the minds of

scientists, to assume the substantial characteristics of sense experiences. Such self-deception leads the scientist into the physical exploration of postulates, on futile chases of most elusive geese. Recourse to the history and philosophy of science, says Dr. Dingle, renders such errors susceptible to detection and the electron, for example, is rediscovered as neither particle nor wave but merely an abstract product of reason, a name that serves usefully for a time to unify a certain class of sense experiences.

Readers who embark upon Dr. Dingle's scientific adventure without some measure of scientific sophistication may find the going rough — but not unrewarding.

C. L. STONG

Carl Linnaeus. By Knut Hagberg. Translated from the Swedish by Alan Blair. (E. P. Dutton & Co., 1953. \$4.50).

This beautifully illustrated book treats one to a highly emotional experience. The great Swedish natural scientist, founder of the modern system of classification of plants and animals, is well portrayed in various aspects of his complex nature — deeply religious, ebullient, industrious, humorous, enthusiastic, peevish, furious, sombre and persistent. The wrapper and frontispiece are fortuitously chosen portraits showing his personality.

The best of the book is Knut Hagberg's lyrical account of Linnaeus' life (1707-1778) against a carefully drawn background of his family and of Sweden of that period, a setting exactly right for his great scientific contribution.

Carl was passionately absorbed in his father's botanical garden. Later he excelled in Science at the University of Upsala and was sent to explore scientifically in Lapland. He then took a medical degree in Holland, but at twenty-six he "already had in his head the theories which, put into print in Holland, were to make him world-famous."

He rounded out his great career as Royal Physician, teacher and writer at the University of Upsala, attracting students from many lands.

The author expounds Linnaeus' life by an analysis of his writings. One finds a lack of continuity, especially as it is not

easy to recognize every quotation, nevertheless Hagberg has made a brilliant contribution to Linnaean literature.

Endpapers: Map of Sweden in the early eighteenth century. Seven illustrations of which four are colored plates of flowers.

WILLIAM E. GREENLEAF

Water. By Thomson King. (MacMillan Co., 1953. \$3.50).

Thomson King's documentary *Water* is a huge panoramic view of the "master element." I found that as I read this remarkable work my admiration grew with each turning of a page; for each page reveals new facts, new mysteries, and new discoveries relating to the element that rightfully is the first wonder of the world.

The miracle of water has shaped the destinies of men and nations throughout history. The reader may refresh his knowledge of this with a reading of chapters relating to the struggle for sea power in the ancient and medieval as well as the modern world. Control of the seas led to control of lands with an abundance of forests, animal life, and vegetation, thereby assuring prosperity. Very few pages of history are devoted to conquests for possession of desert lands.

Even the professional "water works man" will enjoy this treatise in its sections on "percolation and run-off," "dowsers," and "water worship." And the conservationist might well use this as a handbook, for here is the complete story of what man has done with and to water.

Clear and concise, this volume avoids verbosity. The author states that he has written in a popular rather than a technical style. Actually, it appears that the book is a composition of both styles, but the reader's interest is easily held from chapter to chapter. Scholars and general readers alike will be grateful for Mr. King's impressive writing.

I might sum up my evaluation of this book by quoting Milton: "Accuse not nature! she hath done her part; do thou but thine." I for one think Mr. King has done his part admirably.

HARRY S. WILSON

Counterfeiting in Colonial New York. By Kenneth Scott. (*Numismatic Notes and Monographs*, No. 127. The American Numismatic Society, 1953. \$4.50).

This book should interest genealogists as well as historians. It gives the case history of practically every counterfeiter whose name got on the records of colonial New York. Family history compilers wishing to decorate the family tree with an ancestor hanging from the end of a rope may find one in this detailed and well-indexed volume. (Actually, as the author's researches reveal, all but a few of the bad money artists escaped the gallows in one way or another, occasionally by breaking jail, more often through a last-minute pardon.)

Based on a close study of contemporary records, Dr. Scott's monograph is the best account published thus far for any of the thirteen colonies. During the Dutch period counterfeiting seems not to have been a problem, except in connection with wampum. Under English rule the currency became a hodgepodge of different kinds of coin, mostly foreign, and paper money of the various colonies. The great variety of genuine money in circulation made it easy for the counterfeiter to add to the confusion with his own privately minted or printed issues.

Two cases are of local interest: "a Staten Island Schoolmaster" who imitated New Jersey bills of credit entirely with his pen; and John Jubeart, born on Staten Island, a blacksmith by trade, who was hanged for coining false pieces of eight.

H. CLAY REED

Twentieth Century Painting. By Hugo Munsterberg. (Philosophical Library. 1951. \$5.00).

The author of this excellent volume is an associate professor of Fine Arts at Michigan State College and is at present doing research in Japan. He is well known as an authority on Chinese art and brings to this commentary on modern art an unusual background and viewpoint. His smooth and flowing style transports us in mood from the present to the turn of the century, and he makes us conscious immediately of the many events, following one another in rapid succession, that influenced the development of art. Beginning with political phenomena, such as the incredibly lengthy reign of Queen Victoria, he moves us quickly along to the influence of new figures gradually emerg-

ing: Sigmund Freud with his foundations for psycho-analysis; Albert Einstein with his revolutionary theories regarding material, space, time and energy; and eventually to the leading figures in art — the impressionists and the post-impressionists, with a glimpse of the founders of the Fauve movement. All of this in the first chapter.

With this excellent background the author moves on to provide a wealth of material on the lives of the artists themselves together with concise discussions of their works of art. Picasso and Matisse loom largest with one chapter each. Abstract and non-objective painting, expressionism, fantasy, surrealism, and modern painting in America have all been included; and the final chapter brings the reader up to the pertinent events of the year 1950. There are fifty-one plates in black and white and one plate in color, all well chosen. Many works are mentioned, however which are not shown. It is here that the layman, unless he has time for research, may find himself at a disadvantage; but it can at least be said that Mr. Munsterberg has succeeded, if such were his intentions, in making the reader restless to be off to the galleries to have a look at the artists mentioned. This reader for one was driven to private clipping files in search of illustrations of pictures mentioned but not shown.

It is one of the special achievements of this volume that the reader senses the currents of the universe as they flow through the sensitive natures of the artists and out onto the canvases where they are recorded for the benefit of the rest of mankind. It is not so much a book to teach the layman about the mechanics of the paintings as to help him to feel a sympathy for the artists and their work so that he, the layman, may himself learn in his own way what the artist is saying. This truth can be summed up best in what the author seems to present as the "text" of his book, a quotation from Alfred North Whitehead: "The eighteenth century opened with the quiet confidence that at last nonsense had been gotten rid of. Today we are at the opposite pole of thought. Heaven knows what seeming nonsense may not tomorrow be demonstrated truth."

THEA WILBUR

Landscape Flower Arrangements. By Naida Gilmore Hayes. (Thomas Y. Crowell Co., 1953. \$3.50).

The author has done a superb job by showing the art of

flower arranging as both beautiful and practical. She takes a new approach in adopting as her medium dried grasses, leaves, and flowers, together with rocks, driftwood, bark, pods, stones, and other material from the woods and sea shore. This, however, is not without historic background and, in recognition of this fact, one chapter has been devoted to the history of landscape in flower arranging from its earliest use in China to its present use in our United States decor.

The principles of design in the art of flower arranging, as one would expect, are presented in detail, showing how a beautiful composition can be created by the use of harmony, line, proportion, balance, rhythm, and emphasis. In this connection a list of containers, mechanism, weeds, and seeds is helpful to the beginner. Most useful of all, however, are the many beautiful illustrations showing step by step how to make striking and unusual arrangements. For example dried white dandelions, anchored to a holder concealed in driftwood, make a distinctive arrangement. To reproduce this arrangement the dandelions must be picked before the pods open and, when just showing white, should be placed in a carton with the heads supported and the weight off the stems. The pods will open after a couple of days and the stems will be stiff enough to support the grouping.

The foregoing is just a brief indication of the many hints and carefully worked out methods in this book which will appeal to the home-maker and artist; and is a "must" for the naturalist.

MAXINE WILSON

Exploring Nature With Your Child. By Dorothy Edwards Shuttlesworth. (Greystone Press, 1953. \$3.95).

To the parents who want to give their child a meaningful interest in this overwhelmingly materialistic, war-minded world nothing will be more helpful or spirit-calming than a deep love of nature. Encouraging a child to love nature can lead to a life-time interest.

Whether the parent or teacher knows little or much, this book will serve as a guide and a reference in the exploration of nature. There are chapters on birds, animals, fish, snakes and frogs, insects, flowers, trees, the heavens, and weather. A complete index helps to find the answers to such questions as: "Do

Goats Eat Tin Cans?" — "What causes the wind?" — "How hot is the sun?" In addition, one can easily find out how to catch frogs or care for caterpillars brought home from junior expeditions. Many ideas for trips are included, ideas for nature collections, and other suggestions as to the enjoyment of nature. The book is in reality a nature encyclopedia, and over 100 photographs and drawings, all done by outstanding people in their respective fields, add to the book's attractiveness.

The author is well qualified to write for children; having two of her own. Besides, she is founder and editor of the *Junior Natural History Magazine* published by the American Museum of Natural History. She has a keen insight into what children want to know and writes about it in an easy informal manner. Paragraph headings are amusing: "Hognose Snakes — Ham Actors" or "Beetles with Gas Bombs."

This is a good addition to the home as well as to the school library shelf. It should add not only to the understanding of nature, but to the enjoyment of it. Applying the knowledge and lore learned from reading its fascinating chapters, by actual explorations into nature itself, will result in enriching the lives of both parent and child.

EILEEN STRATFORD

Freedom's Way. By Theodora McCormick. (Funk and Wagnalls Co., 1953. \$3.50).

This very readable new novel, which is listed among the summer's best sellers, is of particular interest to Staten Islanders because the author is a well-known resident, Mrs. Delafield DuBois of Dongan Hills.

She has given us this time a story with an eighteenth century pre-Revolutionary background, quite different from her former popular mystery tales.

A story with a wealth of incident, there is "action" in every paragraph, carrying the reader along at a smart pace. Never does the story lag even though some of the incidents are not always plausible — at least to this reader.

The author's note states that the novel is based on authentic material — that there actually was a girl like the heroine Caroline Matilda, a maid of honor at the court of George III, falsely accused of stealing the queen's jewels, thrown into prison

and later shipped to America in chains and an iron collar as a convict indentured servant, where she was bought in Annapolis by a Maryland planter. Escaping finally she had a series of adventures in New York and Charleston, where many thought she was Caroline Matilda, Queen of Denmark.

There is indication of considerable research among contemporary letters and journals and newspapers and printed sources of the period. There are colorful scenes of life on a Maryland plantation and in Annapolis, New York and Charleston as the Colonies were preparing for their struggle with Great Britain. There is even a quick glimpse of Staten Island in the 1750's when the hero tells of his days at the Rev. Mr. Charlton's tutoring school in Richmond.

Freedom's Way is recommended to those who like an action-packed story.

DOROTHY VALENTINE SMITH

Step to the Music. By Phyllis A. Whitney. (Thomas Y. Crowell Co., 1953. \$2.75).

The announcement of another book by Phyllis Whitney has become a regular event of the publishing year. Miss Whitney has long since shown that she has not only the ability to invent and tell a story, but the much rarer gift of being able to do it again every year or two. Most of the books which have appeared in a steady stream with her name on the title-page have been for children or teen-agers, though she did take time out one year to do a textbook for writers. Her latest volume, however, is a definite departure, — a historical novel which teen-agers will doubtless enjoy, but which will have interest for older readers also. I know, because I lent my copy to a gentleman of eighty-three, who came back and asked if I had any more like it.

For Staten Islanders this interest is increased by the fact that the story is set on the Island and the plot is based on the Island's history during the Civil War period. It's a good love-story, and also a good reconstruction of the delicate and dangerous situation which our geographical position and the character of our population created here at that time. Much of the abundant and effective detail was dug by Miss Whitney out of the files of old local newspapers in the attic of the Davis House, a dusty

and tiring job. If some day these papers can be microfilmed, this mine of material will be even more useful than it is now. However, she got what she was after, and has made skillful use of it.

We are betraying no secret in saying that the next Whitne book is already in sight, and we have no doubt that the one after that is on the horizon. Long may the pleasant procession continue.

MABEL ABBOTT

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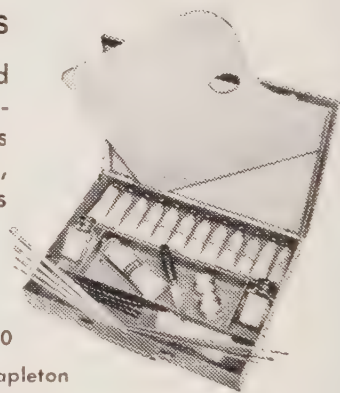
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STATEN ISLAND

INSTITUTE OF ARTS

AND SCIENCES

Volume XVI

Spring 1954

Number 1

PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES

Josephine S. Antonini, Editor

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THE PETROLOGY OF THE SERPENTINITE OF RICHMOND COUNTY

(STATEN ISLAND), NEW YORK

JUAN J. BEHM

INTRODUCTION

The object of this paper is to present significant data concerning the petrology of the Staten Island serpentinite. Previously there has appeared no connected account of the rock unit in question. Whatever is available in geological literature is entirely out of date and in no way represents the present-day facts and theories of modern geology.

The area includes the larger portion of the northeastern section of the island, extending from Saint George and West Brighton to Richmond Town near Old Mill Road, and from Richmond Road, Van Duzer Street, and Saint Paul's Avenue to approximately a line parallel with the Palisades dolerite from Port Richmond to Travis. The western margin is everywhere covered with thick deposits of glacial drift; the limit of the northwestern extent of the serpentinite can only be inferred.

As a rule, the serpentinite comprises the hilly portions of the northeastern part of the island, *i.e.*, Pavilion, Ward, and Grymes Hills; Emerson and Todt Hills and part of Dongan Hills in the central portion; and Richmond Hill in the southwestern portion. Generally, the hills are much rounded and separated by what appear to be deep glacial furrows, such as Clove Valley, Latourette Park, and New Brighton along Brighton Avenue. In the east, the serpentinite is characterized by steep scarps along Pavilion, Ward, and Grymes Hills, but these features are not consistent and are almost absent in portions in Dongan Hills, but again become prominent near Lighthouse Avenue and Old Mill Road in Richmond Town in the central portion of the island. For the most part, the serpentinite is hidden by glacial debris, with the exception of a small area on Dongan Hills, which escaped glacial erosion. Outcrops are generally small and few. They are most frequent in the northeastern portions of the

serpentinite, less abundant in the central serpentinite, and practically wanting along the western margin. Nevertheless, the serpentinite has frequently been exposed in excavations, sewer trenches, and well borings.

The author wishes to express his special indebtedness to Professor L. E. Spock of the Department of Geology at New York University for his guidance and assistance in preparing this paper; to Mr. Lee A. Ellison, Research Associate of the Staten Island Institute of Arts and Sciences, for furnishing the chemical analyses of serpentinite, which the author used in the calculation of norms; to the Staten Island Museum for the use of their collection as a source of reference; and finally to Mr. E. Grekulinski, graduate student at New York University, for his assistance in the field.

GENESIS

The origin of the Staten Island serpentinite is obscure and, like other related rocks, a major problem in petrogenesis. Many theories and hypotheses have been proposed, especially by early authors, but none proved too successful. Even today, prominent workers in the field and in the laboratory are striving for an answer to this most difficult problem. Most successful and most conclusive have been the experiments conducted by Bowen and Tuttle (1949, p. 439-460).^{*} As early as 1886 Dr. N. L. Britton attempted a solution to the problem. However, he failed to recognize the intrusive nature of the serpentinite, a view already held and in part correct, by Messrs. Whitney and Wadsworth (Bulletin Museum Comparative Zoology, vol. VII, p. 464-465). Dr. Britton, apparently not acquainted with pseudo-stratification and severe weathering of the serpentinite near the surface, considered it to be of sedimentary origin, as he said:

"There is no proof that these serpentines are metamorphosed igneous rocks. We have failed to detect any olivine-like minerals in them . . ."

"There is abundant evidence that these rocks are stratified, though this feature cannot be made out in every outcrop." (1886, p. 13).

Pseudo-stratification may be seen in localities such as Richmond Road and Dongan Hills Avenue, Richmond Road and Seaver Avenue, Richmond Road and Midland Avenue, Four

^{*}The bibliography to which all references are made will be found on page 39.

Corners Road and Flagg Place. This pseudo-stratification is common whenever and wherever the serpentinite has undergone considerable decomposition, usually near the surface. Progressing from the surface downwards, the rock becomes more massive and regularly joined.

Dr. Britton regarded the Staten Island serpentinite as coming from magnesian limestones and hornblendic-tremolitic strata, subsequently metamorphosed into serpentinite, a view that does not conform with present-day facts. In further discussing the origin of the serpentinite, Britton asserts:

"Doubtless the Staten Island rocks were originally deposited in a conformable sequence, but the serpentines were left on top in the folding of the strata." (1886, p. 15).

At first, Dr. Britton regarded the Staten Island serpentinite as being anticlinal, though later he changed his views, as he said:

"The idea advanced by me that the serpentine ridge is an anticlinal fold must be abandoned in the light of more recent investigations, it is quite evidently made up of a series of smaller folds, which, collectively are more probably of synclinal structure, though the exposures are not sufficient to satisfactorily settle this question." (1886, p. 15).

Dr. Hollick writes:

"It would appear therefore that in our serpentine area we have an anticline of stratified rocks — almost an overthrust fold, in fact — its axis extending in a general northeast to southeast direction. The rocks are so fractured and traversed by joints and shear planes that only in a very few localities can well defined stratification be seen. One of the best places is on the south side of Richmond Hill, where the edges of the strata may be seen crossing the road between the Latourette house and the school house." (1896, p. 93-94).

Hollick, like Britton, apparently confused pseudo-stratification, a feature that is so prominent in the intensively weathered portions of outcrops, with sedimentary bedding. The notion that the serpentinite is made up of either an anticlinal or synclinal structure is not based on facts, as these are terms strictly used in sedimentary terminology. There is little doubt that the Staten Island serpentinite is associated with strongly folded and contorted crystalline schists and gneisses. The serpentinite, although strongly folded and metamorphosed near the marginal portions, shows little or no deformation in its central part. At the margin, the rock is usually intimately fractured, contorted, and slickensided. Vertically-trending talc and antigorite slickensides are twisted, curved, and bent and are more or less parallel to the foliation. The same

condition prevails in the associated anthophyllite schists along the northeastern metamorphic belt of the serpentinite. The anthophyllite, which is regarded as a derivative of talc, is, in some places, strongly folded.

The only reliable figures for dip and strike on the joints were obtained in localities such as Clove Lakes Park, Albert Street and Lightner Avenue, Flagg's Quarry in Dongan Hills, and Old Mill Road in Richmond Town. The remainder of the exposures are intensively weathered and readings are entirely unsatisfactory. At Clove Lakes Park, the rock is massive and fairly uniform, without appreciable disruption, but one conspicuous and well-spaced set of joints dips 80° NE, with a $N42^{\circ}W$ strike (see pl. 1, fig. 1). A secondary set of fractures, closely spaced (like sheet-jointing) dips approximately 30° NW. The exposure on Albert Street and Lightner Avenue is conspicuously jointed (see pl. 1, fig. 2). A SW-dipping set of joints is conspicuous, also a NE-dipping set of joints. Their average angle of dip is 80° , but some are almost vertical. Talus accumulation hides the bottom of the exposure (see pl. 1, fig. 3). The rock at Old Mill Road in Richmond Town is extremely fractured and jointed. The joints are more or less regularly spaced. One follows an obscure lineation produced by the alignment of pseudomorphs after an iron-rich orthopyroxene, a feature notable in the fresh rock, but more conspicuous in partly weathered serpentinite, because the serpentinite, upon weathering, turns brownish green, whereas the orthopyroxene, remains darker. This conspicuous joint system strikes approximately E — W and dips in a general SSE direction. It is spaced about 1.5 — 6 centimeters apart, average 3 centimeters. A second set of joints crosses the first at about an angle of 60 — 80 degrees. This second set is spaced at intervals of 40 — 60 centimeters. A third set of joints, which is less conspicuous, cuts the secondary set at approximately right angles, and strikes NNW — SSE. Some contortion is noticeable, but surprisingly little so for a marginal outcrop. Hollick asserts:

"First, the rocks have a well-defined line of strike, which follows the general trend of the hills, that is to say it is $N\ 25^{\circ} - 55^{\circ}\ E$ at New Brighton and gradually swings around until it becomes almost E and W at Richmond. The outcrops appear more or less distinct at a distance and their general dip and line of strike can be followed broadly by the eye, but when any particular portion is subjected to the test of the compass and clinometer the observations are often unsatisfactory. Nevertheless, a sufficient number were obtained to determine that, disregarding

minor folds, there is a dip of from 20—60° from the summit of the ridge towards the north and west and an abrupt dip towards the east and south, which is at times almost perpendicular." (1896, p. 93-94).

The form of the ultramafic intrusive remains unknown, but from observers in other localities, alpine peridotites are apparently sill-like or lenticular sheets, generally concordant with the rock in which they occur. Crosby ascribed a stock-like structure to the Staten Island serpentinite:

"The serpentinite relief of Staten Island, on the other hand, is believed to be due to the extrusion (or protrusion) of a plug or stock of serpentinite by the vertical expansion resulting from the progressive downward growth of the serpentinite through the hydration and consequent swelling of the anhydrous magnesian rock in the alteration of which it has its origin." (1914, p. 586).

It is difficult to understand how the Staten Island serpentinite could be a stock-like intrusion, as it is associated with strongly metamorphosed and folded rocks. Furthermore, new theories show that ultramafics cannot be intruded as a magma (Bowen and Tuttle, 1949, p. 455). Petrographic work by the writer shows no evidence of expansion of the rock.

The contortion and crumpling of the rock near the marginal portions of the serpentinite probably resulted from stresses from various directions. The abundance of slickensided surfaces near the marginal portions of the serpentinite indicates that it is apparently associated with a fault. Hess (1937) in his study of Island Arcs has noted that most alpine serpentinites the world over are usually associated with thrust faults along major orogenic zones. At Richmond Road and Raritan Avenue the slickensides of the talc-antigorite show a well-developed vertical series of ridge structures and striae, indicating that the displacement was upwards. The foliation of the serpentinite and that of the talc also trends vertically, but is much contorted. Minor folding is common; the amplitude of most folds averages 0.5 - 1 centimeter or more. Irregular folding and contortion on a large scale is also common. The convex surfaces of the slickensides roughly face the SE. The strike of the foliation is approximately N 34° E. Hollick made the following observation:

"The fact that the most extensive fracturing and shearing occurs along the face of the steep eastern escarpment is significant and at once suggests a fault as the probable cause of the escarpment. Slickensided surfaces on the eastern flanks of Pavilion Hill and Grymes Hill also strongly support this idea." (1909, p. 317).

The metamorphic effects are best seen at Pavilion and Ward Hills and at the foot of Grymes Hill on Van Duzer Street, southwest of Trossach Road. The rock is much fractured and locally more or less folded.

L. P. Gratacap, referring to thin sections made from the rock at Bard Avenue, said:

"The sections showed the characteristic curdled shreddy and broken appearance of serpentine and reveal, between crossed nicol's prisms, luminous colored spots and crystalline fragments of hornblende." (1904, p. 92).

What Gratacap meant by "luminous colored spots" is difficult to interpret; he may have meant relict olivine, although it is doubtful that the rock collected was fresh and free from weathering. There is no hornblende in the serpentinite. The most important amphibole present is anthophyllite; it has been apparently identified as "hornblende" by early authors. According to the U. S. G. S. topographic map, section on historical geology, the Staten Island serpentinite "resulted from the local alteration of hornblende, bronzite, and allied minerals in basic dikes and masses."

This view, held by Hollick, is erroneous and does not conform with the facts gathered by the writer in the field and in the laboratory. Petrographic work and CIPW norms have shown that the Staten Island serpentinite is a serpentinized peridotite, variety *harzburgite*, grading at least in one case into dunite at Pavilion Hill, at the northeastern portion of the serpentinite. Gratacap, like Hollick, believed that the Staten Island serpentinite had its origin in hornblende masses, and he must have been quite positive about it, as he said:

"There seems left little room for doubt as to the origin of the serpentine in question as coming from hornblende masses, and we may regard the greater part, if not all of it, as a derivative product, resulting from altered crystalline metamorphic rocks, generally referable to the amphibole groups." (1904, p. 92).

Hollick cautiously remarked that:

"The rock is everywhere extensively fractured and is traversed by what is apparently a uniform system of jointing, which coincides in general with the trend and slope of the hills and simulates more or less closely the features of strike and dip in sedimentary rocks. Deductions based upon these features alone would justify the opinion that the rock might represent a metamorphosed series of sediments . . ." (1909, p. 316).

The theory that the Staten Island serpentinite had its origin in metamorphosed sediments was gradually replaced by the hypothesis that it had its origin in igneous rocks. Dr. A. A. Julien recognized this, briefly dismissing the theory of sedimentary origin by saying, "There is no longer need of discussion of this view." (1906).

Dr. Julien believed instead that the Staten Island serpentinite was a derivative product of hornblende schist, as he said:

"In the Staten Island rocks the composition is allied to that of combination of olivine and bronzite with diallage. The predominance of amphibole rich in lime and magnesia, with traces of pyroxene, olivine and bronzite, suggests derivation directly from a basic hornblende schist, derivative in its turn from an ancient diallage-bronzite or enstatite rock, passing at one point at least into peridotite." (1906).

In this he was in part correct, though he failed to recognize olivine and enstatite as the essential constituents of the rock. Furthermore, the fresh rock is poor in oxide of calcium. There is no hornblende in the serpentinite; thin sections and chemical data definitely prove this. Hornblende schists are known to exist adjacent to the serpentinite in Saint George. Evidence from thin sections and chemical analyses preclude a genetic relationship between the serpentinite and hornblende schists. These schists probably are altered ancient doleritic intrusions. The only important amphibole is anthophyllite. The anthophyllite schist is ordinarily deep red, brown, or olive green, but may be almost black and, when grading into serpentinitized dunite at Pavilion Hill, could be easily mistaken for a hornblende schist. The writer has, indeed, come upon specimens deposited in the collection of the Staten Island Museum labeled "hornblende schist." Closer analyses proved that the rock in question was a serpentinitized dunite, rich in olivine and cummingtonite.

In further discussing the origin of Staten Island serpentinite, Dr. Julien made mention of "...the occasional slight concentration of chromite, magnetite, and perhaps spinel." (1906). This is surprising as the writer has found considerable secondary magnetite in the rock (see table 1, p. 27). There is mention of the presence of chlorite; thin sections and norms show no chlorite in the fresh rock.

In discussing the origin of Staten Island serpentinite, D. H. Newland reported the presence of olivine in specimens collected at

oidal forms, often displaying a black polished surface and glistening lustre. Ferruginous minerals are abundant on the mountain for several miles. A granular oxide, called by miners shot-ore, from its being principally composed of spherical grains of various sizes, was often noticed, and appears in some places in extensive beds: it is easily fused, and affords a large percentage of good iron castings. A heavy ore, with a smooth surface and some lustre, bearing a considerable resemblance to native iron, is sometimes seen."

Pierce then goes on to describe several interesting features. He apparently discovered the section near the Richmond County Country Club which is noted for having escaped glacial action. The gravel has been studied by Hollick and referred to the Tertiary, but it seems more probable that it is interglacial in origin. The question raised by the presence of sand and gravel on our highest hills as to the possible inundation of the Island has never been settled and the whole story connected with our gravel needs more study. The copper ore has been mentioned under Akerly's notice and the "petrifications of marine shells" are fossils from the seas which occupied central New York state during Paleozoic times some hundreds of millions of years ago.

"Banks of white sand, resembling the siliceous particles of the seashore, are noticed on the mountain tops, containing masses of compact, heavy ferruginous sandstone, similar to the rocks of our alluvial seaboard. Large beds of water-worn siliceous pebbles, in no way differing from those washed by the ocean, are seen on the height of the ridge, in which excavations have been made several feet, leaving the depth of the mass uncertain. On some of the eminences, for a considerable extent, vegetation is entirely excluded by an iron soil. Iron ore imbedded in an earth coloured by, and partly composed of, oxide of iron, occupies the surface; and the chalcedony and radiated quartz are sometimes observed on the primitive ridges. Prospects from many of these eminences are extensive and diversified. On one side, the ocean and a great extent of coast are in view; on the other, a rich landscape of hills and plains, the eye resting on the highland-chain and the mountains bordering Pennsylvania; the harbour, at your feet, presents a busy, ever varying scene, and the city of New York appears to great advantage from this point of observation.

"The district between the mountains and the narrows, the thickly settled and well-cultivated plain bordering Amboy bay, and much of the western division of the island, are decidedly alluvial. Adjacent to Fort Tompkins, detached pieces of copper ore have been found. I have observed petrifications of marine shells in rocks excavated in that neighborhood, twenty feet from the surface, and sixty above the ocean."

Pierce concludes his account of Staten Island with a description of the western side. In finding "no large beds of rock" he seems to have missed the trap rock which extends on Staten Island as a continuation of the Hudson River Palisades. This is the dark rock which was quarried extensively until the early 1900's and still may be seen in many an Island wall and house. The lignite is a continuation of the deposits mentioned by Mitchill and the chalybeate or iron spring was probably the "mineral spring" in New Springville, noted by Anthon and more fully described by

Lee A. Ellison in the *Museum Bulletin* for February 1946, and as indicated above in his article on water in our *Proceedings*.

"The western part of the island presents moderate elevations; the soil, a good medium of sand and clay, is in general fertile; but a tract near the termination is sandy and barren. Some creeks penetrate to near the center of the island, and are bordered by extensive salt meadows. Except at the primitive range, I have observed in no part of the island large beds of rock that can be called in place; but rolled masses of greenstone, sandstone, gneiss, granite, red jasper, and indurated clay appear in general sparingly, but sometimes in abundance on the surface. Lignite has been found in small quantities in the western part of the island. A Chalybeate spring, of no great strength, is the only mineral water met with in Richmond county. The ponds, wells, and streams contain a soft water, holding no lime in solution."

In conclusion, we must pay tribute to Pierce for his early discoveries. The physical labors alone are worthy of our admiration as they were made at a time when the Island was rural indeed. Yet he was able to gather a surprisingly good list of our rocks and minerals which, through publication in the *American Journal of Science*, brought Staten Island to the attention of the leading men of the day and laid the base for further studies. Some of these, particularly those by Samuel Akerly, will be discussed in the January issue of the *Proceedings*.

the intrusion of a pegmatite granite in Tompkinsville, upon former talc deposits. Chemical analyses of the anthophyllite schists on Ward Hill, show a deficiency of water (see table 2, p. 28. The water of hydration present in the serpentinite varies from 13 — 16 per cent or more (see table 1, p. 27), whereas that of the anthophyllite ranges in the neighborhood of 3 — 4 per cent, a condition which suggests at once that the water must have been driven off, presumably by heat given off by the pegmatite granite in Tompkinsville. Difficulties arise, however, as we realize that the anthophyllites are strongly metamorphosed, folded, and contorted. It could be that the serpentinite, at the time of intrusion, suffered severe metamorphism of its outer portions in part due to friction, pressure, and heat in its upward journey along a major fault system. Little is known about the extent and continuity of the pegmatite granite in Tompkinsville; yet, test borings at Saint George Ferry Terminal in 1946 came upon pegmatite granite, indicating that the extent of this acid intrusive may be considerable. However, the granite at Saint George does not necessarily imply a continuation of the granite in Tompkinsville; they may represent independent intrusions. Whether the granite had any major effect upon the serpentinite is questionable and even doubtful in the light of modern theories. In many parts of the world, serpentinites and peridotites are closely associated with acid intrusives and yet do not show any appreciable alteration (see Benson, 1918, p.721-722). Another difficulty in regarding the granite in Tompkinsville as a source of hydrothermal alteration is that portions of the rock at Pavilion Hill grade more or less into *dunite*, slightly serpentinitized. Thin sections of this rock show parts consisting almost completely of pure olivine associated with cummingtonite. It is logical to assume then that because of the nearby presence of the pegmatite granite, hydrothermal alteration should have been strongest in this locality. Consequently, the writer regards the pegmatite granite inadequate as a source of hydrothermal alteration.

Bowen and Tuttle further note that:

"... reheating may be carried to such an extent that serpentine formed at low temperatures is subsequently changed to higher-grade phases." (1949, p. 457).

In other words, transformation of serpentinous material into olivine and talc is possible at high temperature.

"It seems reasonably certain that the olivine in these rocks has been regenerated in the course of metamorphism...essentially thermal in nature . . . The grains of olivine are quite commonly poikiloblastic, enclosing smaller grains of serpentine, talc and iron ore." (MacDonald, 1942, p. 244).

This is not so with the rock at Pavilion Hill. None of the fresh olivine examined in thin section by the writer shows any enclosed grains of antigorite or talc. Serpentinization, where present, takes place around the outer margins of the olivine crystals. The central portions of the olivine are fresh and clear and show no major change. In one of their experiments on the serpentinization of natural olivines, Bowen and Tuttle assert that:

"Many attempts have been made to effect serpentinization of natural olivines, usually without success, unless a reagent was added to the water used in the pressure vessel (Jander and Wuhler, 1938). With water only, our results show that the pure forsterite cannot be serpentinized except below Curve I (400° ca.) Earlier attempts with forsterite have usually been made at too high a temperature or have not been carried on long enough. Many former attempts were carried out with natural olivines containing iron. The usual failure is here even more markedly due to the attempt to effect the change at too high a temperature, for we have found that the iron-bearing olivines can be serpentinized only at still lower temperatures." (1949, p. 453).

Evidently, their experiments show that serpentinization is a low-temperature phenomenon. They state further that this is especially true of dunite, a rock that consists essentially of pure olivine. Bowen and Tuttle further show that serpentinites and related intrusives cannot be injected as magmas (*i.e.*, in a liquid state). In reference to a dunitic magma, Bowen and Tuttle state that:

"It could exist in the completely liquid state therefore only above the very high temperature at which olivine melts. In the absence of such very high temperatures at any stage of the existence of these rocks, it was suggested that dunite was never liquid as such but was formed by accumulation of early olivine crystals from a complex magma. It was also suggested that when the mass of olivine crystals thus accumulated was subjected to the appropriate forces it might be intruded into other rocks as a solid or substantially solid mass with little if any liquid to lubricate its flow (Bowen, 1917, p. 237)." (1949, p. 454).

They further note that:

"... even if a dunitic magma can exist containing large quantities of water - 10 per cent or more - it probably could exist only at high temperatures and certainly, from our results, at a temperature above 1000° C. This is equally true of a hypothetical peridotitic magma having a composition equivalent to olivine plus orthopyroxene plus water and corresponding approximately or exactly with serpentine in composition. The possibility of the formation of dunites, serpentines, and peridotites from such supposed magma intruded at low temperatures is definitely excluded." (1949, p. 455).

Hess, on the other hand, states:

"Even the serpentinitized peridotites of the much deformed, deeply eroded Appalachian belt do not show an internal texture such as might be expected if solid flow occurred. To be sure they are much jointed, often schistose along contacts and full of slickensided shear zones, but the individual blocks between joints are in the great majority of cases uncrushed." (1938, p. 326).

Thin sections of the rock from various localities in the central serpentinite show sub-parallelism of the olivine-antigorite, including a few curved crystals of bastite-enstatite. At Old Mill Road the writer found what appear to be lineations produced by the alignment of the altered orthopyroxene in the rock. This alignment is more or less parallel with the margin of the serpentinite. Hess, in reference to a border facies, says:

"... the writer has for several years sought to collect specimens of the border facies (chill facies) of peridotites for examination and chemical analysis. They are difficult to find; first, because many of them are altered to talc as a result of the action of hydrothermal solutions from younger granites or other sources; and second, because of the peculiar characteristics of these intrusives toward weathering and erosion, which generally results in their cores being low hills and their contacts swamp-covered areas." (1938, p. 323).

The writer has not been able to find evidences of contact metamorphism of any type near the marginal portions of the serpentinite. This is mainly due to the fact that the direct contact of the serpentinite with the schists and gneisses, in which it is apparently emplaced, is everywhere covered by glacial debris. Existing differences in texture are merely the result of differential hydrothermal alteration. Megascopically, the rock is apparently more fine-grained near the marginal portions and generally lacks the typical "porphyritic" texture, a feature that is so common in the central ultramafic complex. This fine-grained texture might well be mistaken for a chilled border facies. In thin section, such textural variations have no significance. Previous to hydrothermal alteration, the Staten Island peridotite must have been uniform in texture throughout, with the possible exception of Pavilion Hill, where it grades into a dunite. Even if a contact with the adjacent schists and gneisses was observable, it is doubtful that there would be any evidence of contact metamorphism in the light of modern theories. Hess asserts that:

"In contrast to the high temperature (much higher than basalt) which an ultramafic melt might be expected to have according to the chemical data, quite the contrary appears to be true. The metamorphic effects of these peridotite magmas on their

wall rocks is so much less than that produced by intrusions of a basaltic magma of the same dimensions that this point alone might be used to suggest that they could not have been derived from a basaltic magma." (1938, p. 325).

Ultramafic-plutonic intrusive masses such as serpentinites and peridotites are typically associated with strong orogenic deformation. Benson called them "alpine peridotites." These peridotites are almost always present in regions of dissected fold mountains all over the world. They are consistent as regards petrography, type of intrusion, and tectonic relationships (see Turner and Verhoogen, 1951, p. 244). It is well known that alpine peridotites and serpentinites appear as steeply inclined sheets or lenses concordant with the usually strongly folded rocks in which they are emplaced (see Turner and Verhoogen, 1951, p. 239). It may well be that the Staten Island serpentinite is lenticular in shape, although this is impossible to prove as the rock is largely covered by glacial drift. The Staten Island serpentinite is part of a swarm of ultramafic rocks that extends along the eastern border of the Appalachian system. They are apparently associated with orogenic zones and structural weaknesses. Hess says:

"A series of serpentinitized peridotite intrusions may be traced in a continuous belt from Newfoundland to Alabama. In Gaspé Peninsula Alcock has shown that they intrude Ordovician rocks and are overlain by Silurian rocks unconformably. Throughout the rest of the northern portion of the belt they lie in Cambro-Ordovician sediments. In the southern portion of the belt they lie predominantly in schists which the writer regards as Cambro-Ordovician but which are considered by some to be pre-Cambrian. In either case the continuity of the belt, and the fact that it maintains the same position with regard to the mountain system, indicate that the entire serpentine belt is of Taconic age." (p. 279).

In reference to ultramafic intrusions, Bowen and Tuttle say:

"Under certain conditions of crustal deformation, apparently involving strong overthrusting, dunitic and related material, coming at times perhaps from a peridotite shell of the earth, at other times from a peridotite mass that has formed as a differentiate of gabbroic magma, can be intruded in a completely crystalline state into the accessible levels of the earth."

"... field facts indicating low temperatures, together with our experimental results, preclude the belief that the material is in the form of magma." (1949, p. 455).

Turner and Verhoogen assert that:

"With the exception of 'cold intrusions' of serpentinite, emplacement of the ultramafic bodies involved intrusion of highly magnesian ultrabasic 'magma' along structurally controlled surfaces of weakness in the invaded rocks." (1951, p. 244).

Many geologists also agree that the emplacement of the ultramafic masses usually occurs in the beginning stages of folding, at the end of the cycle of sedimentation. The latter is normally followed by orogeny. The strong stresses and compressions brought about by the folding and subsequent faulting of the rock containing the ultramafic mass must have at least in part contributed to the formation of the anthophyllite schists along the northern and northeastern scarp of the serpentinite.

Alpine peridotites and serpentinites are almost always associated with belts of geosynclinal sediments (Turner and Verhoogen, 1951, p. 240). These basins may well be responsible for the water of the hydration and consequent serpentinization of the ultramafic mass. Bowen and Tuttle assert that:

"There is no reason to suppose that the crystalline mass initially has more than traces of water. If, as it moves slowly under the deformative forces, the mass comes into a zone of wet rocks it may acquire water from those rocks, as Hess (1938, p. 331) has suggested. Above 500° C, or even above 400° C if it is a mass of olivine only, the amount of water that can enter the mass will be merely that which can exist as vapor in the pore spaces and minute fractures of the crystal aggregate which is suffering gliding translations and perhaps also granulation and some major fracturing. The vapor so existing may greatly facilitate the flow of the mass after the manner suggested by Sosman (1938)." (1949, p. 455).

In other words, the ultramafic mass would act like a glacier in its upward journey along a major fault zone. In reference to hydrothermal alteration, Bowen and Tuttle say:

"... it seems necessary to conclude that such rocks are not ordinarily metamorphosed in the cooling cycle during which they first came into being. It is much more likely that they usually cooled without significant metamorphism and were later subjected to hydrothermal metamorphism and reheating, due to solutions of extraneous origin which were capable of introducing certain substances and of carrying others away." (1949, p. 457).

Hess remarks that:

"The formation of such typically hydrothermal minerals as talc, chlorite, actinolite, magnesite, etc. is due entirely to later and unrelated alterations produced by hydrothermal solutions, as a rule derived from younger granitic intrusions, though any other source of hot aqueous solutions may produce the same result." (1937, p. 263).

The above statement may again remind the reader of the presence of the pegmatite granite in Tompkinsville and its possible effect upon the ultramafic mass. Bowen and Tuttle further state that:

"Though the tendency toward uniform serpentinization of

all the minerals of the ultramafics indicates that serpentinization has usually been the work of solutions of extraneous origin which have probably reheated the peridotite, it is likely that upon occasion conditions have been right for serpentinization during the cooling cycle. It is only necessary that an aqueous medium be available during the cooling cycle. In this case, too, it will be, we are forced to conclude, of extraneous origin." (1949, p. 457).

Field studies and thin sections show that hydrothermal alteration has been strongest near the marginal portions of the serpentinite, especially along the eastern and southeastern portions. Enstatite is largely replaced by talc near the marginal portions of the Staten Island serpentinite, a condition that indicates strong hydrothermal alteration. Concerning such a condition, Bowen and Tuttle say:

"Rocks in which talc occurs as pseudomorphs after enstatite crystals are probably so formed . . . In the cooling cycle . . . enstatite goes to talc while the olivine is still unaffected." (1949, p. 457).

On Staten Island, the essential constituents olivine and enstatite have been largely altered to antigorite, serphophite, and bastite in the central portions of the serpentinite, although considerable relict olivine and enstatite may still be present. In reference to these minerals Bowen and Tuttle say:

"In the usual example of serpentinization both olivine and orthopyroxene go to serpentine, but the orthopyroxene is the more resistant, and some of it may survive unchanged when the olivine is completely replaced." (1949, p. 457).

The above does not hold true for the Staten Island rock. Examination of the fresh rock in thin sections from such localities as Castleton Corners and Clove Lakes Park has repeatedly shown the relative abundance of relict olivine and the scarcity of relict enstatite. In fact, in many specimens all the enstatite has been converted to bastite, with hardly a trace of enstatite present. Thin sections of the rock from Old Mill Road have shown a radical alteration of the orthopyroxenes, and yet olivine may be abundant. Of the two, olivine seems to have been the more resistant to hydrothermal alteration.

Concluding, the writer wishes to emphasize that problems relating to manner of intrusion, source of hydrothermal alteration, and shape of serpentinites and peridotites remain a mystery and are far from solution. Only extensive geophysical work may serve to answer some of the problems relating to the shape and extent of the Staten Island serpentinite in the rock in which it is em-

placed. This, however, would prove far too costly and economically unfeasible.

PETROLOGY

The essential constituents of the Staten Island serpentinite were chrysolite, associated with enstatite and bronzite. The main accessory mineral was picotite. In its present condition, the rock consists of hydrothermal alteration products, antigorite, serpophite and chrysotile after chrysolite, bastite after enstatite and bronzite, secondary magnetite after chrysolite and enstatite-bronzite, talc and anthophyllite after enstatite or antigorite. Picotite remained almost unchanged in the central serpentinite, but is replaced by magnetite near the marginal portions. On the east side of Pavilion, Ward, and Grymes Hills, and less so at Richmond Road and Raritan Avenue, anthophyllite replaces talc and antigorite completely or in part. Some anthophyllite grades imperceptively into fibrous asbestos and may be associated with cumingtonite, tremolite, and more rarely, actinolite. Veins of introduced minerals are calcium and magnesium carbonate, colloform opal and chalcedony. Megascopically, the rock is markedly homogeneous at Clove Lakes Park, Albert Street and Lightner Avenue, Castleton Corners, New York City Housing site on Manor Road and Schmidt's Lane, excavations on Sunset Avenue for gas pipe to Brooklyn, Ocean Terrace and Todt Hill Road, and other localities (see map, pl. 5). The localities listed above occur within the main and more or less central complex of the serpentinite. It consistently shows a marked "porphyritic" texture produced by the development of large crystals of bastite-enstatite in a finer and somewhat granular groundmass of antigorite-serpophite-chrysolite. The rock breaks most easily in the direction of the orthopyroxene cleavage, but may break with a subconchoidal fracture. The bastite-enstatite crystals are sub-parallel and some display twinning. The cleavage surfaces of the bastite-enstatite exhibit a high vitreous or adamantine-pearly luster, are black or greenish black and are embedded in a fine-grained groundmass of blackish green antigorite-serpophite. In some of the specimens, all the original enstatite altered to bastite, usually rich in dusty secondary magnetite; whereas in others, a considerable amount of unaltered enstatite was left over, some of the grains being almost intact. A considerable amount of relict olivine occurs in some specimens.

Serpentinite from Castleton Corners is excellently preserved and free from weathering. The rock is massive, resembling a gabbro in its toughness and high specific gravity. The crystals of bastite-enstatite measure on the average from 2 mm — 5 mm, although some of them may be as much as 20 mm long. The bastite-enstatite is usually traversed by many irregular cracks. Twinning may or may not be present. The bastite-enstatite is prismatic in habit, usually in short and stubby blades. These crystals may occupy as much as 30 per cent of the total rock. Thin sections show unaltered chrysolite and enstatite in varying amounts. Occasionally, whole grains of unaltered enstatite may still be seen. Furthermore, thin sections show some secondary amphibole or anthophyllite associated with bastite-enstatite and apparently derived from it, much antigorite and some serpophite, bastite and accessory picotite. The olivine is, as a rule, clear and fresh; the contact with the lenticular antigorite is abrupt (see pl. 2, fig.1). The chrysolite occurs in more or less well-preserved crystals, some of them being more or less fractured. The serpophite is crystalline, "glassy," structureless and usually appears as cores surrounded by fibro-lamellar or lenticular antigorite. Dusty secondary magnetite occurs along the margins of the serpophite. In the center, the serpophite is clear and structureless. Occasionally, serpophite encloses single lenticular constituents of antigorite, which in turn may contain relict chrysolite. The beginning stages of the formation of anthophyllite from enstatite may or may not be present. The relative amounts of antigorite-serpophite and secondary magnetite depend on the original intensity of hydrothermal alteration. Secondary magnetite occurs as: (a) irregular grains and masses along the former cleavage traces of the chrysolite, from which it was released; (b) dusty streaky inclusions parallel to the former cleavage and parting traces of the enstatite, from which it was released; and (c) dusty inclusions in antigorite and serpophite. Thin and irregular veins of introduced carbonates traverse the rock. Picotite is common; it is deep red or brownish red and transparent under plain light, showing octahedral parting. Much picotite is fractured; the fractures are filled with antigorite.

The rock from Clove Lakes Park is essentially the same as that from Castleton Corners, except that antigorite may be more common than serpophite. Noteworthy is the fact that in some specimens both the antigorite and olivine suggest parallelism.

The fibro-lamellar constituents of the antigorite do not consistently show lattice-structure, a feature that is so common in the serpentinite, but may instead show curved ovoid lenticular constituents, whose axes trend parallel to the olivine crystals. Relict enstatite is common (see pl. 2, fig. 2). The bastite-enstatite does not necessarily follow the parallelism of the antigorite; nevertheless, it shows bending and curving of the crystals and, under crossed nicols, shows a wavy extinction, apparently due to strain. This feature may be particularly well developed in enstatite where the parting traces are approximately perpendicular to the trend of the antigorite-olivine. Anthophyllite is associated and usually intergrown with the enstatite-bastite and apparently derived from it. The anthophyllite is non-pleochroic and can be recognized by its typical amphibole cross-section; it is usually sparse and never present in sufficient amounts to affect the classification of the rock. Megascopically, the rock breaks most easily in the direction parallel to the cleavage surfaces of the bastite-enstatite. Minute veins of introduced carbonates traverse the rock in varying amounts. Graphite occurs sparingly in grains and masses suggesting pseudo-hexagonal prisms; they are steely-gray in color, are of scattered occurrence, and measure on the average from 0.5 — 10 mm.

The rock from the New York City Housing site on Manor Road and Schmidt's Lane is much the same as that from Castleton Corners, except that clear, "glassy," and structureless serpopphite, surrounded by lenticular antigorite, is more conspicuous; there is little or no relict enstatite and a little chrysolite. Some of the antigorite shows sub-parallelism, a feature that is not necessarily consistent. Chrysotile occurs in cross-fiber veinlets; these are roughly parallel to the trend of the antigorite. Varying amounts of talc are associated with bastite. There is stronger concentration of secondary magnetite in bastite; broad fibro-lamellar aggregates of antigorite are associated with the bastite and talc pseudomorphous after enstatite (cf. Old Mill Road).

Accessory picotite or chrome-spinel is well preserved in the foregoing described localities, is transparent under plain light, and is of a deep red or brownish red color (see pl. 2, fig. 3). Furthermore, it shows octahedral cleavage and parting and a high relief; it may show corrosion around its borders. The picotite contains varying amounts of magnetic impurities around its

borders. Small grains of picotite are characteristically more strongly replaced by secondary magnetite. Picotite may grade more or less into spinel on one hand and into chromite on the other. It is usually well preserved in partly weathered serpentinite. Although picotite is not an abundant constituent of the serpentinite, thin sections show that it makes up about 0.70 — 1 per cent of the total composition of the rock.

Although serpentinite collected at other localities in the central serpentinite is more or less weathered, nevertheless the original constituents are still apparent, and the rock is megascopically similar to that on Castleton Corners (see map, pl. 5).

The rock from Flagg's Quarry, which is near Todt Hill Road and the Richmond County Country Club, Dongan Hills, is crystalline, massive, of high specific gravity, and in every respect similar to the serpentinitized peridotite found in the central portions of the ultramafic complex, except that the bastite-enstatite crystals become less common; their average size is below that of the rock from the central serpentinite. Thin sections show much clear and fresh chrysolite, surrounded by lenticular antigorite. Much residual enstatite is present (see pl. 2, fig. 4). The enstatite is clear, colorless and shows no pleochroism under plain light. Varying amounts of bastite are present, some showing the beginning stages of the formation of talc. The groundmass consists of lattice-structure antigorite enclosing crystalline cores of serphophite. Small amounts of anthophyllite are associated with the unaltered enstatite. Accessory picotite shows greater corrosion and magnetic enrichment around its margins than that from the central complex of the serpentinite. Secondary magnetite occurs as: (a) irregular grains and masses along the former cleavage traces of the olivine; (b) minute dusty streaky inclusions, parallel to the former cleavage and parting of the enstatite. Secondary magnetite is more abundant in the rock at Flagg's Quarry than in the rock from the central serpentinite. Irregular veins of introduced carbonates traverse the rock in varying number.

The serpentinite along Bard Avenue northeast of Clove Road is rusty brown and much weathered near the surface. Fresh serpentinite is blackish green; it is not crystalline in appearance as the rock from Castleton Corners. All traces of the bastite-enstatite have disappeared, a condition due to stronger hydrothermal alteration. However, some talc is present in small grains, replacing

the former enstatite. Megascopically, the rock is somewhat similar in appearance to that found in excavations along Brighton Avenue, near Lafayette Avenue, in New Brighton. Thin sections show abundant relict olivine; it is clear and fresh and is surrounded by lenticular antigorite. The latter shows some preferred orientation and is, in this case, parallel to the trend of the chrysolite crystals. Serpophite is less abundant than antigorite. Serpophite is clear and crystalline and may show a greenish tint. The margins of the serpophite show dusty secondary magnetite. The center of the serpophite is clear and crystalline. It is usually surrounded by lenticular antigorite and may contain grains of relict olivine. There is no enstatite; it is completely replaced by talc and antigorite. This antigorite occurs as broad fibro-lamellar constituents, oriented at random; it lacks the strong pleochroism present in the antigorite after enstatite at Brighton and Lafayette Avenues. Talc is intimately associated with the antigorite replacing enstatite. Talc is apparently the last mineral that was formed. It occurs as minute shreds and masses embedded in antigorite after enstatite and is oriented at random. Secondary magnetite occurs as: (a) irregular grains and masses replacing olivine; (b) linear and streaky inclusions following the former cleavage and parting of the altered enstatite; these inclusions are not always distinct; (c) dusty accumulations along the borders of serpophite; (d) irregular masses along the borders of picotite. Picotite is similar to that of the central serpentinite, except that there is stronger corrosion and more secondary magnetite around its borders; it is fractured and shows octahedral parting. Smaller fragments are more completely replaced by secondary magnetite.

The serpentinite found near Old Mill Road approximately a quarter mile west of Richmond Hill Road, in Richmond Town, is blackish green when fresh. Its texture is similar to that of a fine-grained basalt but suggests "porphyritic" texture. The rock is heavy, massive, tough, and traversed by minute veins of various carbonate products. The serpentinite has a subconchoidal fracture. The rock weathers rusty brown, grayish green, and rusty green. Glaciation has removed much of the weathered mantle, and fresh serpentinite is easily obtained. Megascopically, the rock is "porphyritic" (cf. central serpentinite) due to the presence of an altered iron-rich orthopyroxene, a feature most notable in the weathered rock. Thin sections show no relict enstatite. As a

rule, there is very little unaltered chrysolite; however, it may be abundant in scattered portions of the rock. Large grains of broad fibro-lamellar aggregates of antigorite rich in secondary magnetite, measuring from 1 mm — 2 mm are common; these are pseudomorphous after the iron-rich orthopyroxene, possibly bronzite (see pl. 2, fig. 5). Dusty accumulations and irregular grains of secondary magnetite occur in linear streaks parallel to the former parting and cleavage traces of the orthopyroxene. In some specimens secondary magnetite may be so abundant as to obliterate almost completely the outlines of the altered orthopyroxene. Picotite has been completely replaced by secondary magnetite (see pl. 2, fig. 6). A rim of bleached antigorite encloses some of the altered orthopyroxene and picotite and, under crossed nicols, exhibits anomalous ultra-blue interference colors. The bleached antigorite is lamellar, mutually intergrown, and oriented at random. Some talc is associated with the altered iron-rich orthopyroxene. Ordinarily, chrysolite is almost entirely altered into antigorite and serpophite, although clear and fresh olivine may still be present. Secondary magnetite follows the former cleavage traces of the olivine in irregular grains and masses in varying amounts. Antigorite is fibro-lamellar and shows random orientation. This antigorite is apparently last to form as it crosses the other varieties (cf. 1073 Todt Hill Road). Lattice-structure antigorite and lenticular antigorite enclose cores of crystalline serpophite. The ratio of the antigorite to serpophite is not constant. Talc occurs as: (a) small fibro-lamellar shreds intimately associated with antigorite after chrysolite, oriented at random; (b) minute shreds intergrown with antigorite pseudomorphous after the iron-rich orthopyroxene. Chrysotile veins averaging 0.5 — 1 mm in width are common. These veins are compound, with two or more occurring side by side. The chrysotile veins frequently follow joint surfaces of the master set of joints, or they may traverse the rock irregularly. Some chrysotile veins may be 3 mm thick. They are silvery, white, or yellowish and are characterized by a pearly luster. The rock is similar in every respect to that of the central serpentinite, except that it has undergone stronger hydrothermal alteration. As a result, all of the orthopyroxene was changed to antigorite and talc rich in secondary magnetite. Megascopically, the rock is more fine-grained than that from the central serpentinite and "sugary" in appearance due to the presence of much "glassy" serpophite. In

some specimens, the last generation of antigorite completely replaces all other constituents, including antigorite after chrysolite, orthopyroxene, and even talc. Constitutionally, the fibers of the last generation of antigorite are shorter, broader, and not as prismatic as those at 1073 Todt Hill Road. Calcium carbonate occurs in veins or in irregular masses, showing traces of rhombohedral cleavage.

The rock exposed at the end of Piccadilly Road on a little path leading to Latourette Golf Course and that on Lighthouse Avenue is megascopically and microscopically similar to that at Old Mill Road.

The serpentinite exposed in an excavation at 1073 Todt Hill Road, on Dongan Hills, when fresh, is very dark green, massive, and of high specific gravity. Its texture is fine, with abundant inclusions of little shiny scales of talc, intimately associated with antigorite. The rock lacks the typical crystalline quality of the rock located in the central complex of the serpentinite. There is no bastite-enstatite; hydrothermal alteration must have converted all of the available enstatite into talc. These talc inclusions measure on the average from 1 mm -- 2 mm and show a tendency to be subparallel. Chrysolite occurs in varying amounts, but may be fairly abundant; it is replaced by secondary magnetite completely or in part. Most of the rock is extremely rich in secondary magnetite, largely derived from the alteration of the olivine and former orthopyroxene. The matrix is very dissimilar to that of the central serpentinite. Lenticular lattice-structure antigorite encloses chrysolite and secondary magnetite. Generally, the components of lattice-structure antigorite are fine, but may be coarse in parts of the rock. There are two generations of antigorite. The first (A1) occurs as lattice-structure lenticular pseudomorphs after chrysolite and as broad fibro-lamellar constituents replacing the former orthopyroxene. The second generation (A2) traverses the first; it also traverses the talc and olivine. A2 is apparently latest, as it cuts all the other constituents of the rock. The talc is later than A1 but is older than A2. The A2 antigorite occurs as large and fibro-lamellar constituents; it is prismatic and needle-like, with parallel crystals occurring in long and tabular masses, either coherent or in individual fibers parallel to each other. The constituents of the A2 generation are not curved, but straight. It is transparent and clear under plain light, but displays bluish-gray

interference colors under polarized light; it has parallel extinction. Talc occurs as broad and fibro-lamellar constituents and is associated with both the first and second generations of antigorite. Talc replaces completely, or in part, antigorite pseudomorphous after the orthopyroxene. There is no picotite; it has been completely replaced by secondary magnetite without loss of the original crystal form. These crystals may be 3 mm or more long. Irregular veins of introduced carbonates traverse the rock in varying number. Veins of silica and chalcedony are common. These features suggest strong hydrothermal alteration in this locality.

The rock at Richmond Road and Raritan Avenue is fairly well preserved at street level, but weathered beyond recognition of the original constituents near the top of the exposure. It is much foliated, very fine-grained when fresh, blackish green, and of high specific gravity. Talc occurs as: (a) folia between those of antigorite; (b) irregular veins and masses traversing the rock. The talc slickensides are much contorted and show that the serpentinite has apparently undergone strong metamorphism and, in thin section, shows the beginning stages of the development of anthophyllite from talc. The rock is a foliated talcose serpentinitized peridotite. It is megascopically similar to that at Old Mill Road, except that it is much foliated and lacks the typical "porphyritic" texture. The plane of foliation of the antigorite and talc are characterized by a silvery white to pearly luster. Some slickensides show a mirror-like polish. The talc weathers less rapidly than its associate antigorite. Irregular veins of introduced carbonates traverse the rock in varying number. Thin sections show much unaltered chrysolite, lattice-structure antigorite enclosing crystalline cores of serpo-phite, and broad and fine fibro-lamellar constituents of talc, oriented at random and mutually intergrown, forming irregular bands of varying thickness; their contact with the adjacent antigorite may or may not be abrupt (see pl. 3, fig. 1). Large crystals of secondary magnetite, measuring 0.5 — 2 mm in size are common; they are pseudomorphous after picotite.

Serpentinite found along the northeastern outcrops, at Van Duzer Street at the foot of Grymes Hill, Ward Hill on Homer Street, and Pavilion Hill on Saint Paul's Avenue and Van Duzer Street, are much metamorphosed, contorted, and fractured. Besides antigorite, talc and anthophyllite are among the most important mineral constituents. The fresh rock is dark green,

blackish green, or grayish dark green; its texture is fine-grained, like a basalt. Some specimens are "porphyritic" with grains of talc replacing the original bastite-enstatite. Some talc grains retain the former structures of the orthopyroxene. Hydrothermal alteration has been differential, but strong. Thin sections show much fibrous and lattice-structure antigorite and varying amounts of unaltered chrysolite. On Pavilion Hill, portions of the rock imperceptibly grade into blackish, slightly serpentinized dunite, rich in chrysolite, and traversed by prismatic needles of cummingtonite, oriented at random (see pl. 3, fig. 2). In most specimens the olivine is completely preserved in patches among long, fibrous and curved shreds of antigorite. The rock, a dunite rich in cummingtonite, has been mistaken as "hornblende" schist by early authors. The olivine is typically and irregularly fractured, and the intervening spaces are filled with antigorite. The crystals of olivine are clear and fresh and surrounded by a little antigorite (see pl. 3, fig. 3). Serpentinization has been weak in this locality. Some of the crystals of olivine are traversed by blades and prisms of cummingtonite; these are latest in development as they traverse all other constituents. The olivine does not gradually grade into the antigorite; the contact is abrupt. There is no enstatite. The most important metamorphic mineral is cummingtonite. It occurs as fine or broad elongate prisms and tabular crystals oriented at random. Most of the cummingtonite apparently formed from serpentinous material, but some evidently came directly from chrysolite. Irregular cross-fractures of varying size are common in cummingtonite. Some anthophyllite is present in the dunitic material. It has the same general appearance and crystallographic habits as cummingtonite, except that its extinction is parallel. At Ward Hill, talc is usually intimately associated with anthophyllite. Small scales of talc are found between the folia of anthophyllite. The latter is theoretically regarded as a derivative product of talc and antigorite. Both talc and anthophyllite are extensively slickensided, and associated ridge structures and striae are well developed. As a rule the talc is highly foliated, soft, and greasy to the touch, and usually of a clear apple green, silvery green to almost pure white pearly luster. Talc may occur as: (a) folia interbedded with those of antigorite; (b) veins and veinlets traversing the main serpentinous mass; (c) fibrous constituents intergrown with antigorite; (d) grains replacing the former bastite-enstatite. Talc

may also occur in massive form, steatite, or as talc schist. This schist, when green, has frequently been confused and identified as "chlorite schist" by early authors. Chemical analyses show too little alumina in the serpentinite to warrant the existence of chlorite in significant amounts. In thin section, talc schist occurs in many broad or narrow elongate fibrous and platy aggregates, more or less parallel to each other, though individual fibers are often bent and curved. The talc constituents are usually white or grayish white under plain light. The larger aggregates of fibers are oriented at random and vary greatly in size. The talc has almost completely replaced antigorite; a few traces of the latter may still be present, the constituents of which are seen to be traversed by narrow fibers of talc; in other words, the beginning stages of the formation of talc from antigorite may be seen. The talc is more resistant to weathering and is almost invariably fresh in even partly or completely decomposed antigorite. The borders of the individual talc fibers and constituents are dented, jagged, and serrated; they are sharply contrasted from each other. The intervening spaces between the fibers and aggregates of talc are filled with magnetite and limonite. Some calcite is associated with the talc. Veins of magnesite are common. The beginning stages of the formation of anthophyllite from talc may be seen in some specimens; the constituents are oriented at random in the main talcose groundmass. Indurated talc is reddish brown, brown, or yellowish brown. It is associated with anthophyllite schist, into which it grades, suggesting retrogressive metamorphism. Megascopically, the indurated talc resembles a fissile shale, which breaks with difficulty perpendicular to the trend of the foliation. Fibrous anthophyllite is quite abundant on the east side of Ward, Pavilion, and Grymes Hills. Some anthophyllite grades into fibrous asbestos (see pl. 3, fig. 4). This asbestos has also been found in sewer excavations along Richmond Terrace and other localities in Saint George and New Brighton (see Hollick, 1902, p. 41). The anthophyllite schist is tough, splintery, and of high specific gravity. Breakage across the plane perpendicular to the schistosity is extremely difficult. The rock is much tougher and stronger than ordinary mica schist. The anthophyllite schist is much twisted and contorted. Ordinary massive serpentinite at Ward Hill is traversed by irregular veins of carbonates, colloform opal, and chalcedony, and more rarely, brucite and hydromagnesite. The serpentinite is

distinctly traversed by minute veins of carbonate that may run more or less parallel to each other and usually closely spaced. Veins of porcellaneous magnesite may be 10 mm or more thick. The magnesite has a conchoidal fracture; its appearance is that of "unglazed porcelain," but will take on a high shine when polished. It may be white, cream, greenish yellow, and pink. Some calcite shows traces of rhombohedral cleavage. Crystals of octahedral magnetite are usually associated with the introduced carbonates; with diameters of about 0.25 — 0.5 mm. Dendritic growths are common on the surfaces of veins of magnesite. Thin sections show much relict chrysolite associated with lattice-structure antigorite, talc, secondary magnetite, colloform opal, chalcedony, and the various carbonate products. There is much lenticular antigorite and little serpophite. The rock is rich in secondary magnetite, largely occurring as irregular grains and masses along the former outlines of the olivine. In thin section, anthophyllite occurs as blade-like and prismatic constituents; irregular cross-fractures are common (see pl. 3, fig. 5). Theoretically, anthophyllite is a product of retrogressive metamorphism:



Fresh serpentinite from excavations on Brighton Avenue and Lafayette Avenue is greenish black, heavy, and massive. It lacks the typical crystalline texture of the rock found in the central serpentinite. Irregular veins of introduced carbonates of varying size are common. Thin sections of the fresh rock show much relict olivine but no traces of enstatite. The latter has been replaced by large, broad, and fibro-lamellar aggregates of antigorite, oriented at random, measuring from 0.5 — 5 mm or more. This antigorite is strongly pleochroic, *i.e.*, dark brown, dark green, and light green. It is intimately associated with fibro-lamellar talc oriented at random. Occasionally, talc almost completely replaces antigorite pseudomorphous after enstatite. The talc is more abundant near the borders of the altered orthopyroxene. Crystalline serpophite and lenticular antigorite occur in approximately equal amounts. Some serpophite encloses relict olivine. Lenticular antigorite encloses crystalline and structureless cores of serpophite. Occasionally, both may show sub-parallelism. Serpophite may retain the original crystal out-

TABLE 1. Chemical Analyses of Staten Island Serpentinite
Corresponding Normative Minerals.

Oxide	1	2	3	4	5	6
SiO ₂	35.40	35.78	33.80	33.04	34.84	35.66
Al ₂ O ₃	0.00	0.22	0.21	0.05	0.02	0.00
Fe ₂ O ₃	11.25	7.66	9.06	9.33	4.66	7.34
FeO	2.83	2.21	1.66	2.70	1.93	3.17
MgO	36.16	37.04	37.14	38.35	38.86	37.02
CaO	0.00	0.26	trace	0.24	0.00	0.00
Na ₂ O	0.15	0.30	0.39	0.38	0.25	0.04
K ₂ O	0.08	0.34	trace	0.04	0.10	0.04
TiO ₂	0.00	0.00	0.00	trace	0.02	0.00
P ₂ O ₅	0.00	0.16	0.03	0.01	0.21	0.00
Cr ₂ O ₃	0.55	0.24	0.40	0.66	0.39	0.33
NiO	0.24	0.24	0.51	0.28	0.23	0.16
MnO	0.14	0.21	0.14	0.43	0.57	0.15
H ₂ O	13.40	14.77	14.74	13.91	16.66	15.07
ZnO	0.15	—	0.58	0.11	0.64	0.80
CO ₂	0.13	0.54	0.56	0.51	0.62	0.61
Total	100.48	99.97	99.22	100.04	100.00	100.39
Olivine	52.36	57.82	63.84	69.72	70.64	55.02
Enstatite	29.50	25.80	17.70	11.80	17.57	30.36
Magnetite	11.05	9.55	10.30	10.30	6.95	12.20
Hematite	4.80	1.40	2.90	2.90	—	—
Acmite	1.48	2.84	2.84	2.84	2.30	0.49
Chromite	0.90		1.15	1.15	0.60	0.45
Picotite		0.73				
Potassium Metasilicate		0.64				
Total	100.09	98.78	98.73	98.71	98.06	98.52

1. Pavilion Hill — Saint Paul's Avenue and Van Duzer Street
2. N. Y. C. Housing site — Manor Road and Schmidt's Lane
3. 1073 Todt Hill Road — Dongan Hills
4. Old Mill Road — Richmond Town
5. Flagg Estate — Well boring — Dongan Hills
6. Brighton and Lafayette Avenues — New Brighton

The *norms* have followed the CIPW system. They were calculated necessarily on the basis of material free from water, carbon dioxide, calcium oxide, and zinc oxide. Also, the chemical analyses show many elements present in amounts too small to be taken into consideration.

Analyst, Lee A. Ellison, Research Associate of the Staten Island Institute of Arts and Sciences

TABLE 2. Chemical Analyses of Weathered Serpentinite, Anthophyllite Schist and Hornblende Schist

Oxide	1	2	3
SiO ₂	38.67	51.78	32.35
Al ₂ O ₃	—	0.06	8.53
Fe ₂ O ₃	5.81	12.65	22.62
FeO	1.30	0.57	16.10
MgO	36.37	28.33	0.83
CaO	0.34	0.13	8.40
Na ₂ O	0.55	0.12	1.16
K ₂ O	0.08	0.10	0.45
TiO ₂	0.00	0.14	10.10
P ₂ O ₅	0.35	0.07	—
Cr ₂ O ₃	0.22	0.13	0.05
NiO	0.20	—	—
MnO	0.36	0.11	0.22
H ₂ O	16.11	3.82	—
ZnO	—	0.19	—
CO ₂	0.08	0.06	—
Total	100.44	98.86	100.81

1. Weathered serpentinite — Albert Street and Lightner Avenue
2. Anthophyllite schist — Ward Hill; Homer and Swan Streets
3. Hornblende schist — Saint George Ferry Terminal

Remarks: The hornblende schist is not genetically related to the serpentinite. Note the increase of SiO₂ in 1, the relative high percentage of SiO₂ in 2, and lower percentages of H₂O and MgO in 2 (compare with table 1, p.27).

Analyst, Lee A. Ellison, Research Associate of the Staten Island Institute of Arts and Sciences

lines of the altered olivine. Some antigorite after enstatite shows a strained extinction. Evidently, some serpophite is changing into antigorite, as both may grade into each other. Serpophite is always pseudomorphous after chrysolite; the resulting antigorite takes on lattice-structure; the individual fibers of the lenticular antigorite follow the former outlines of the altered chrysolite. Antigorite pseudomorphous after orthopyroxene almost completely obliterates the cleavage and parting traces of the former enstatite. Occasionally, traces of the outlines of the former orthopyroxene may be seen. Antigorite pseudomorphous after enstatite is irregularly curved, with few exceptions. Secondary magnetite occurs as: (a) dusty linear streaks along the former cleavage traces of the altered orthopyroxene; this feature, however, is not always consistent; (b) irregular grains and masses along the former cleavage traces of the altered chrysolite; (c) octahedrons after picotite; in some grains some dark red transparency is still present, indicating that the change was not complete; (d) dusty concentrates in antigorite and serpophite. Hydrothermal alteration was stronger than at Bard Avenue, but not as strong as at 1073 Todt Hill Road.

WEATHERING OF SERPENTINITE

Fresh serpentinite is greenish black, blackish green, or dark green, depending on the secondary magnetite present. When weathered, the prevailing colors may be greenish gray, olive green, bluish green, apple green, or rusty brown. This great variety of colors results mainly from differential weathering of the surface rock. Weathering usually renders the rock useless and obscures the original constituents. Fresh samples are absolutely necessary in the determination of the mineral constituents of the serpentinitized peridotite. Chemical analyses of weathered specimens suggest the introduction or subtraction of other oxides. Excavations, borings, and the writer's ambition to "dig deep" into the rock have made the availability of absolutely fresh serpentinite a reality. The weathered mantle of the serpentinite is very variable, from a few centimeters or decimeters in strongly glaciated areas to three meters or more in unglaciated areas. Among the best exposures are those in Clove Lakes Park and Old Mill Road. The excavations on Castleton Corners, Manor

Road, and Brighton and Lafayette Avenues also yielded excellent specimens. Weathering proceeds along the joint surfaces first. This feature ordinarily breaks the serpentinite into rhomboidal blocks. Every stage of decomposition, enrichment, and recrystallization may be seen. This is particularly true of the unglaciated areas on Dongan Hills and was excellently illustrated in excavations conducted at Todt Hill Road and Flagg Place (see pl. 1, fig. 6). Generally, the sequence from top to bottom was: (1) a thin mantle of reddish brown ferruginous earths; (2) ferruginous and talcose clayey incoherent masses; (3) light green or rusty brown and much fractured serpentinite; (4) more compact, olive green or bluish green jointed serpentinite. In a nearby excavation on 1073 Todt Hill Road this latter was followed by a dark green to blackish green serpentinitized peridotite, practically free from weathering. All stages of weathering may be observed in a single large hand specimen. The rate of decomposition of the rock is by no means an even and uniform process; the amount of decomposition with depth is highly differential. Pisolitic, oolitic, botryoidal or reniform limonite is commonly found in profusion near the top layers of the decomposed serpentinite. Large veins of introduced carbonates traverse the rock and may be as much as 2 — 4 centimeters thick, mottled with irregular green patches. Generally, the serpentinite first weathers into olive green or rusty brown, without the appreciable loss of the original constituents. As decomposition progresses, the evidence of the original rock constituents is gradually destroyed; introductions of silica and carbonate and the concentration of hydrous iron ore may be common. Finally, the rock decomposes into light green or ferruginous incoherent masses of clay-like constituents. Silica enrichment and the concentration of hydrous iron ore may lead to the formation of "geodes", with irregular cavities lined with rusty brown, green, or clear crystals of quartz of varying size. The limonite is botryoidal, reniform or pisolitic, but may be amorphous.

Serpentinite obtained near the surface in excavations at Brighton and Lafayette Avenues is intensively weathered, showing extreme enrichment effects with various carbonate products. It is noteworthy that the more weathered the serpentinite is the greater is its carbonate content. Chemical analyses of the fresh rock show little or no oxide of calcium (see table 1, p. 27). Consequently, it is difficult to escape the conclusion that the lime and

various other carbonate products must have been of extraneous origin, possibly from ancient overlying material. Large and irregular veins of calcium carbonate, up to 20 mm thick, are common. The serpentinite containing these veins may resemble *bowenite*, a fine-grained variety of weathered serpentinite. It is apple green, grayish green, and much stained with iron oxide.

The rock exposed at Albert Street and Fine View Place is much weathered; it is light green, brownish green, and yellowish green. Much octahedral magnetite is associated with veins of introduced carbonates; the magnetite is usually twinned, up to 1 mm in size, but usually 0.5 mm or less. This magnetite is apparently recrystallized secondary magnetite; it is not present in the fresh and unweathered rock; it only occurs as secondary magnetite in irregular grains and masses and dusty accumulations after chrysolite and enstatite. The edges of the octahedral magnetite are commonly truncated, simulating hexagonal outlines in cross-section. Recrystallized secondary magnetite is apparently due to weathering, deposited by circulating ground waters. Multiple twins of octahedral magnetite may or may not be present; four or more may be intergrown in a series.

Serpentinite obtained from an excavation for the Women's Dormitory at Wagner College is extremely weathered, but shows little limonitization. Furthermore, the rock is abundantly studded with tiny crystals of octahedral magnetite, some extremely small, about 0.1 mm. This magnetite apparently originated in the same manner as that at Albert Street and Fine View Place. The minute crystals of octahedral magnetite are evenly distributed in the serpentinite and do not necessarily occur in veins of introduced carbonates. The rock is rather light because of the loss of constituents due to leaching; it is finely porous. These pores are about 0.1 mm average size; they are irregular and may or may not contain crystals of octahedral magnetite. Upon exposure to surface weathering, this magnetite is changed to limonite. Several stages of weathering must have affected the rock; there is no other explanation to account for some of the peculiarities of the rock in this locality. Octahedral magnetite may also be found at Ward Hill and Pavilion Hill, and at Victory Boulevard and Brook Street.

CONCLUSION

The Staten Island serpentinite shows little or no deformation in the central part. The most extensive fracturing, folding, and contortion occurs along the eastern and northeastern scarp of the serpentinite. Staten Island serpentinite is apparently associated with a major orogenic belt of thrust faults along the eastern Appalachian metamorphic belt.

Field studies in different localities show that most peridotites are lenticular or sill-like in structure, concordant with the strongly folded schists and gneisses with which they are usually associated. The Staten Island serpentinite may be lenticular or sill-like in structure; this is difficult to prove as the rock is largely covered by glacial drift.

The serpentinite shows strong hydrothermal alteration along the margins, but less so in the central part. In its present condition the rock consists of hydrothermal alteration products, antigorite, serpophite, bastite, chrysotile, talc, and secondary magnetite. The most important metamorphic rocks are anthophyllite and talc schist. Anthophyllite forms large and apparently independent masses embedded in the serpentinite. Chemical analyses and thin sections show that the anthophyllite is genetically related to the serpentinite. Thin sections and norms also show that the Staten Island serpentinite is an altered olivine-enstatite peridotite, variety *harzburgite*.

"The Johns Co., manufacturers of asbestos [fibrous serpentine] goods, mined about seventy or eighty tons on Pavilion and Ward's hill some forty years ago and then abandoned the enterprise, as it was not in sufficient quantity to repay the expense of excavating although some of the material was of excellent quality, as may be seen by examining the numerous specimens contained in our collections."

"... a certain Ernest E. V. von Brandenburg, better known as 'Broughton Brandenburg,' was arrested and held on seven indictments, charging grand larceny and conspiracy, for selling stock in an asbestos mine on Staten Island, which he also claimed yielded rubies and emeralds." *Proceedings*, Vol. I (3), Oct. 1918 - May 1922, pp. 87-88.

"... a quarry of massive serpentine near Todt Hill Road has supplied building material for a number of houses in the vicinity erected under the direction of Mr. Ernest Flagg and the attractive church of the Huguenots was built of the same material." *Staten Island and Its People*, Leng and Davis, Vol. II, p. 626.

PLATE I

Photographs of exposures in Staten Island serpentinite

- Fig. 1. Jointed and massive serpentinite. Clove Lakes Park, looking north-west
- Fig. 2. Jointed and massive serpentinite. Albert Street and Lightner Avenue, looking west
- Fig. 3. Typical exposure of serpentinite; note talus accumulation. Albert Street and Lightner Avenue, looking north
- Fig. 4. Vertically-trending anthophyllite. Foot of Grymes Hill on Van Duzer Street, looking south-west
- Fig. 5. Fractured and weathered serpentinite. Foot of Grymes Hill on Van Duzer Street, looking north-west
- Fig. 6. Differential weathering in serpentinite, showing enrichment effects. Excavation Todt Hill Road and Flagg Place, looking north

PLATE II

Photomicrographs of Staten Island serpentinite

- Fig. 1. (X26). Relict olivine and secondary magnetite in antigorite (plain light). Cloves Lake Park
- Fig. 2. (X26). Relict enstatite in antigorite (plain light). Clove Lakes Park
- Fig. 3. (X26). Picotite in antigorite (plain light). Manor Road and Schmidt's Lane
- Fig. 4. (X26)². Relict enstatite in antigorite and olivine (plain light). Flagg's Quarry
- Fig. 5. (X26). Secondary magnetite pseudomorphous after ortho-pyroxene in serpoplite-antigorite (plain light). Old Mill Road
- Fig. 6. (X26). Secondary magnetite pseudomorphous after picotite in structureless serpoplite (light areas) surrounded by lenticular antigorite (dark areas): note rim of bleached antigorite enclosing the altered picotite (plain light). Old Mill Road

PLATE III

Photomicrographs of Staten Island anthophyllite schist and talc schist and dunite

- Fig. 1. (X26). Talc schist (crossed nicols). Raritan Avenue and Richmond Road
- Fig. 2. (X26). Cumingtonite in chrysolite (plain light). Pavilion Hill; St. Pauls Avenue and Van Duzer Street
- Fig. 3. (X50). Chrysolite in slightly serpentinized dunite (plain light). Pavilion Hill; St. Pauls Avenue and Van Duzer Street
- Fig. 4. (X26). Fibrous anthophyllite in shreddy antigorite (plain light). Ward Hill; Homer and Swan Streets
- Fig. 5. (X26). Crystal of anthophyllite in foliated serpentinite (plain light). Stapleton

PLATE I

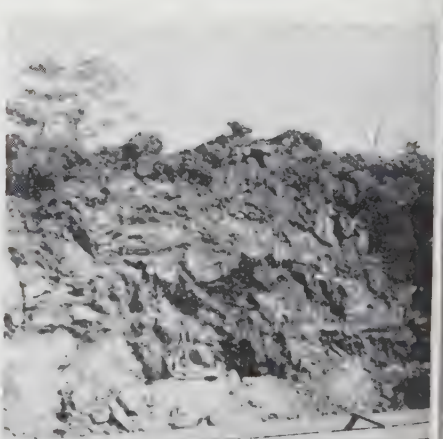
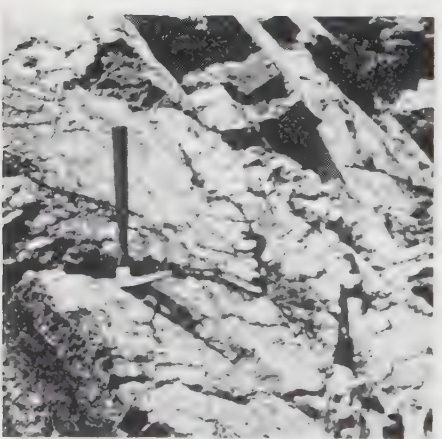
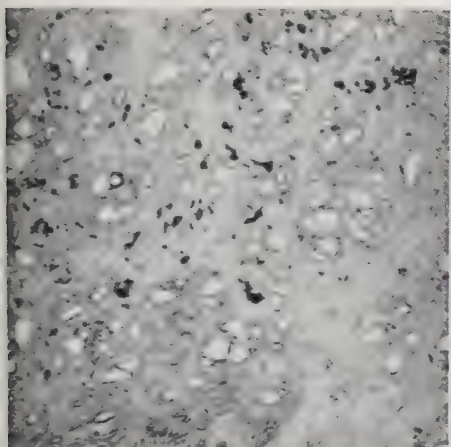
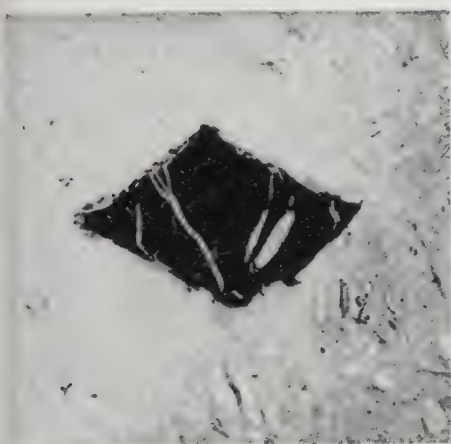
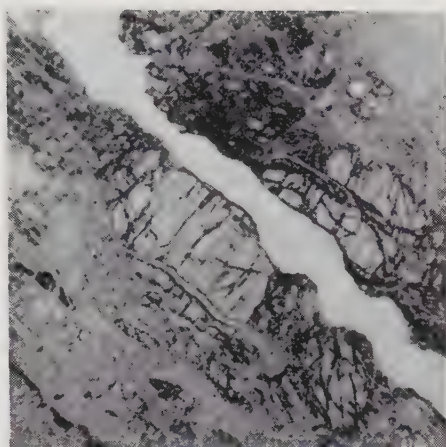


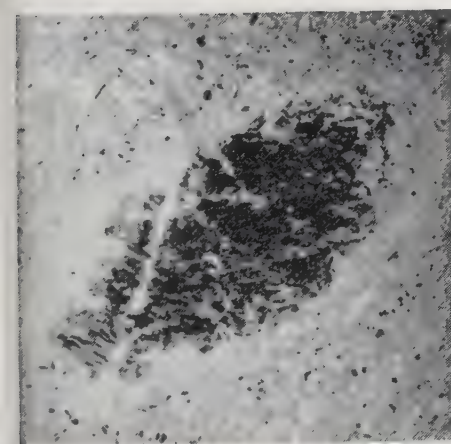
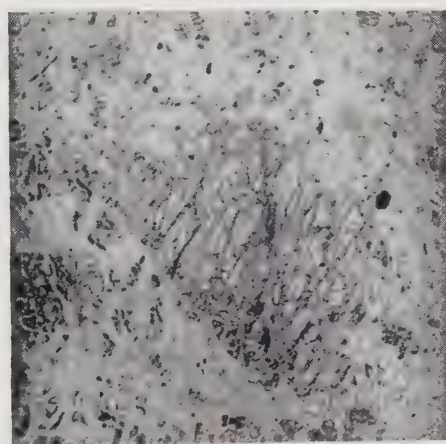
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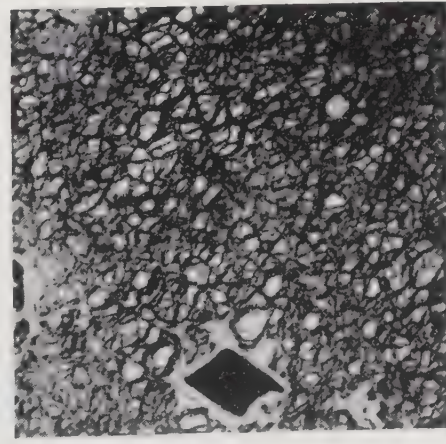
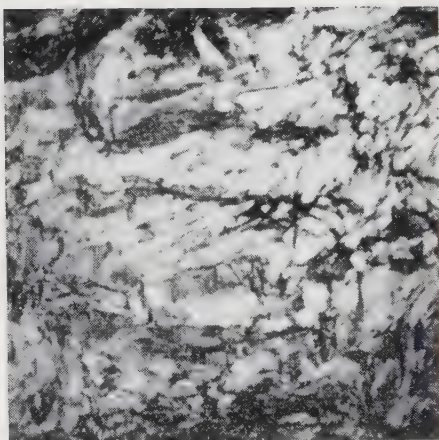
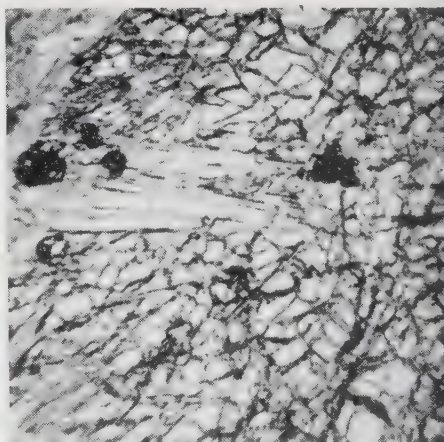


PLATE III

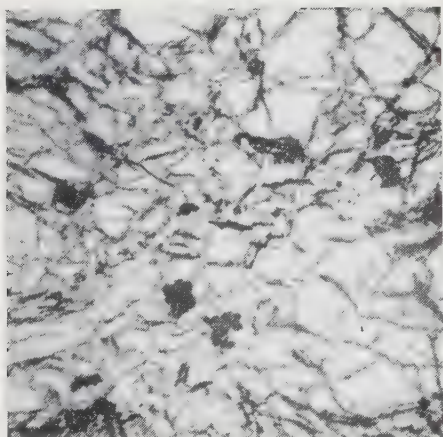
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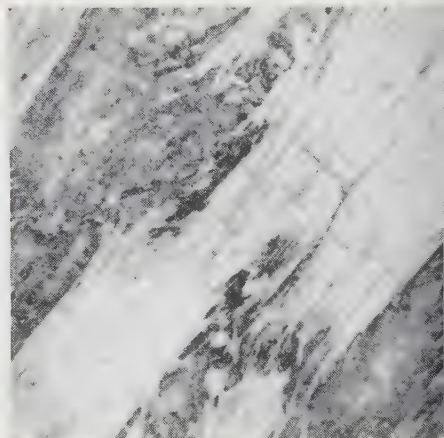
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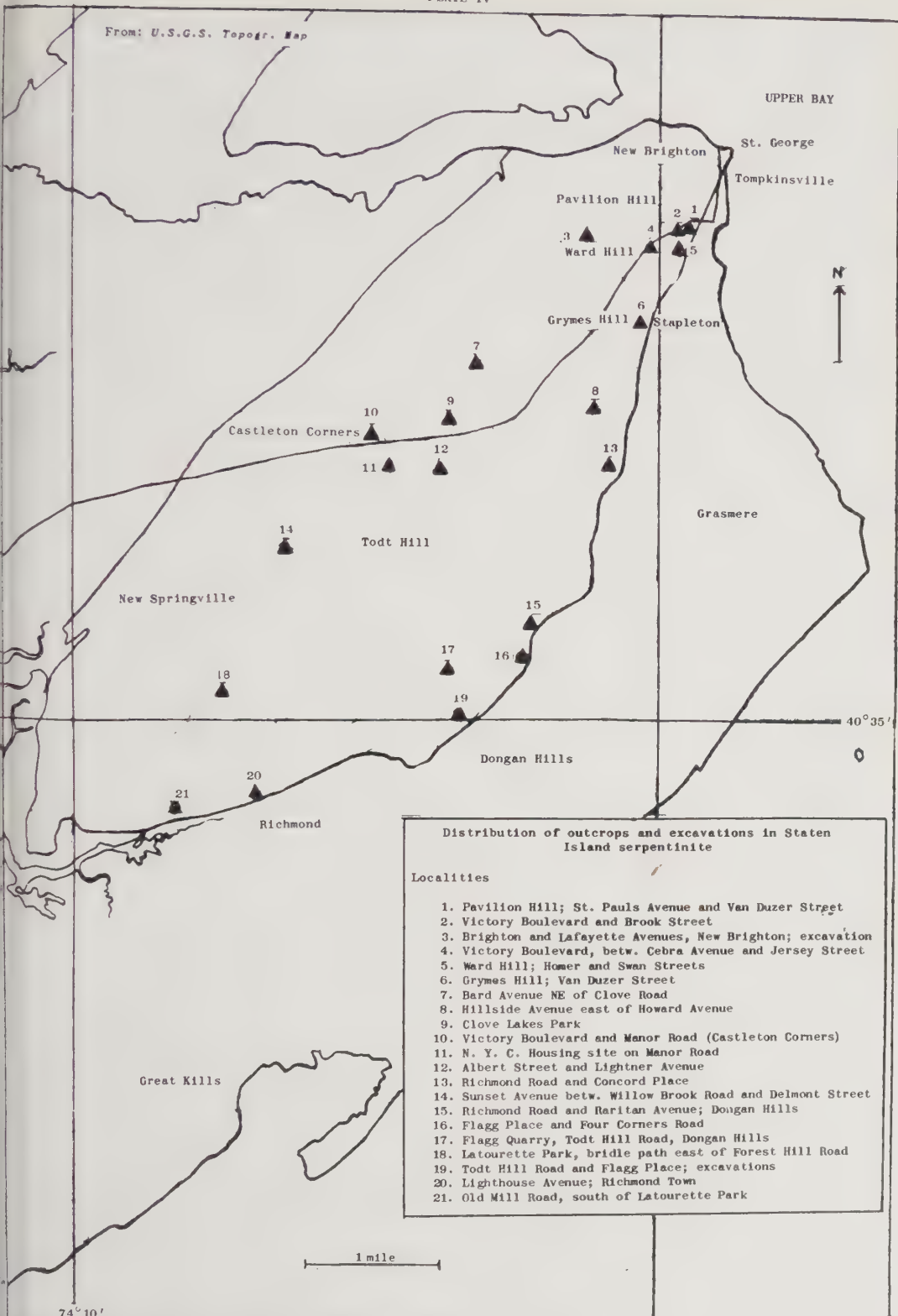


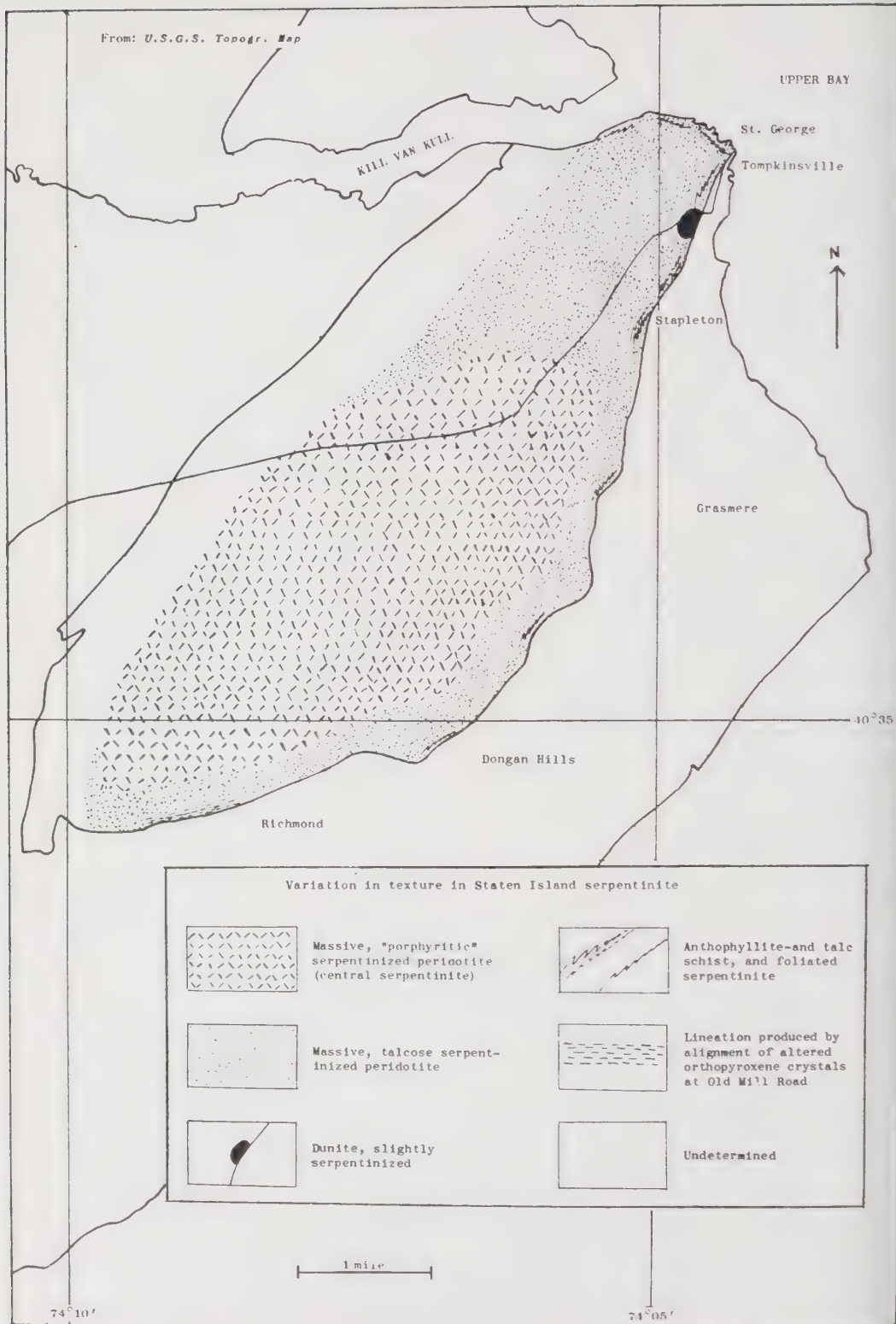
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WILLIAM WINTER ON STATEN ISLAND

1879 - 1917

ROBERT YOUNG, JR.

William Winter, the celebrated drama critic, lived on Staten Island for an unbroken period of thirty eight years. He brought his family there to settle permanently in the spring of 1879. But the Winters were not strangers to the community. They had resided there previously, in a cottage high on Fort Hill for three years before moving back to New York in 1874. Two of their children, Arthur Elliot and Louis Victor, had been born during the first stay. The return to New York after three years on the Island had been made necessary by the constant travel to the theatre there, followed by a stint of work at the *Tribune* office, and then a late ride back by ferry across the harbor to home. It had been too much for the ever-frail critic, who never weighed more than 130 pounds the whole of his long life.

The family stayed in Manhattan for one year. Then, hoping to find a haven in the north, they moved to Toronto, Canada. From Toronto Winter wrote to his friend William A. Seaver, telling him: "I must stay here a few days till we are settled in our new home. I shall then return to New York and again resume my work for the *Tribune*. . . . Percy will go to college here. . . . The little ones will run wild in the fields. I intend to settle here at last, on the shores of Ontario." It was the fifteenth place of residence William and Elizabeth Campbell Winter had had since their marriage in 1860.

The following year, 1877, William Winter made his first trip to England. He returned to sing praises of the old country and of its people. He again wrote to Seaver. "I believe I have left a pleasant memory in England. I know I have left much of my heart there. . . . I found many friends and for the first time in my life I felt I was at home in the world. . . . I intend — solemnly — to settle in England. It may not be at once. It certainly will be in time, if I live." He was to live until 1917. But never, in the years after announcing his preference for England, was Winter able to effect settlement there.

The urge to reside in England made Winter conclude Toronto was just another way-point in the search for a lasting

home. Again he turned to Staten Island. And on April 21, 1879, the family arrived back in New York.

Winter had written ahead, completing negotiations for, as he mentioned to Seaver in still another letter, "the purchase of a cottage on Fort Hill, New Brighton, in which we shall be settled after the 28th (of April). . . . The house is a three-story wooden building. . . situated. . . near the top of Fort Hill. I don't know the name of the street, but it's the same street on which we lived when we were there before." The street was Third Avenue. The number, 17, later changed to 46, and still later, to 146. The street is presently known as Winter Avenue, and the house, modernized, still stands and is in use.

After moving from Toronto, Mrs. Winter went back to visit her mother in the fall and at that time, November, 1879, another son was born. Named William Jefferson, he joined Percy (the eldest), Arthur, and Louis in making the big house ring with the sounds of childhood. In 1881, with the birth of the fifth and last child, a daughter, Viola Rosamund, the Winter family was complete.

Definitely settled on Staten Island, Winter found himself among friends in a quiet, peaceful community where he could work on the volumes of writing he was to do in addition to the drama criticism which, in forty-four years of working for the New York *Tribune*, appeared in over 12,000 editions of the newspaper.

First of his friends on the Island, and the closest, was George William Curtis, whom he had met many years before at the home of Longfellow, where both were privileged to visit. Recalling the meeting in his book, *Old Friends*, in 1909, Winter noted that one figure in particular attracted his gaze as he entered the large drawing-room at Longfellow's home. "It was a young man, lith [*sic*], slender, faultlessly apparelled, very handsome, who rose at my approach, turning upon me a countenance that beamed with kindness His complexion was fair. His hair was brown. . . . His features were regular and of exquisite refinement. His eyes were blue I was introduced to him by Longfellow: and then and thus it was that I first beheld George William Curtis." Curtis took to Winter immediately. In the years of friendship that followed, the critic learned much from the eminent orator and writer. Their close association ended

when Curtis died in 1892.

Throughout the Winters' long tenure on Staten Island their home was the scene of many a momentous visit by the famous men and women of the time. Among the writers to call were Longfellow, Curtis, Thomas Bailey Aldrich, Oliver Wendell Holmes, Laurence Hutton, Bram Stoker, Bayard Taylor, Albert Henry Smyth, Edmund Clarence Stedman, and Horace Howard Furness.

The roll-call of those in the theatre, both in America and England, is even greater. It includes actors Edwin Booth, Henry Irving, Laurence Barrett, Joseph Jefferson, Richard Mansfield, and Robert Bruce Mantell; actresses Ellen Terry, Ada Rehan, Mary Anderson, Helena Mojeska, and Julia Marlowe; and producer-managers Augustin Daly and David Belasco.

The study in which Winter wrote contained two pieces of furniture of particular note. One was the former editorial counsel table where Horace Greeley met and talked with his associates in the early days of his *Tribune*. The second was a carved ebony sofa upholstered in red plush. Winter often referred to the sofa as "the throne of memory." When one or another of his friends came to visit, if they did not seat themselves upon the sofa by choice, the critic would ask them to move to it. Toward the end of his life, after death had taken all his wonderful friends from him, he would seat himself upon the red plush. "I like to come here and sit," he once remarked to his youngest son William Jefferson, "because they have all sat here."

Life in the house was pleasant and unmarred until 1886, when, in late January of that year, tragedy came to the family. Out sledding on the deep snow of Third Avenue, Arthur, then nearing fourteen years of age, and a favorite of his father, fell and injured himself fatally upon some hidden rocks. The accident occurred January 15th. Nine days later the boy died in his sleep. At that moment Winter's work was brought to a complete stop. Months later Winter told J. H. Brown: "The boy whom I have lost was *the one* on whom all my hopes and plans were centered. I never knew, and I never heard of, a child so gifted. He had genius, beauty, gentleness, goodness, and infinite charm It has broken his mother's heart and it has made me a desolate man, prematurely old, broken and careless of what befalls."

Winter made no mention of the tragedy in his diary, but

the following April 5th, on which the child would have been fourteen years old, he recorded that flowers had been placed on the grave in Silver Mount Cemetery and that Arthur's picture had been sent to George William Curtis, who had delivered the funeral oration.

The boy had been the favorite of many others beside his father. Mary Anderson was particularly devoted to him. The last thing she did before taking leave of Winter to sail for England shortly after the funeral was to place white lilies and roses upon his grave. And until her own death, more than fifty years later, she kept his picture in her room.

Hard upon the boy's demise, William Winter wrote to Frederick E. Partington, then principal of the Staten Island Academy, where Arthur, his brothers and sister, had attended school. The letter served first notice of the critic's wish to establish a memorial to his son in the form of a library. This was officially done November 13, 1887, when the deed of trust was signed by Winter, his wife, and A. G. Methfessel, president of the academy.

At the time of its inception one of the finest collections of its type in the United States, the Arthur Winter Memorial Library is still part of the Staten Island Academy. The shelves display a rare selection of books, many inscribed by their authors, contributed by Winter and his friends, along with various paintings, sculptures, and photographs. Unique in the collection is a copy of the Breeches Bible,* given by Edwin Booth, and reported to be one of only seven copies in existence.

Around the turn of the century the Winter household became divided. Mrs. Winter decided to establish a residence in Southern California, the plan being that Winter would one day retire there. An investment was made in a ranch in Mentone, near Los Angeles. Thereafter, Winter was to make numerous journeys between Staten Island and the ranch. It was in Los Angeles that his daughter Viola met and married Fielding J. Stilson, in 1904.

*The Breeches Bible was printed at Geneva, Switzerland, in 1560 by a group of English divines. The first English translation to appear in Roman type, it was also the first to omit the Apocrypha, and to recognize the division into verses. It was in common use in England until the version ordered by King James was introduced in 1611. The Breeches Bible is so called because Gen. 3:7 is translated: "Then the eyes of them both were opened, and they knew that they were naked, and they sewed fig leaves together and made themselves *breeches*."

Later divorced from Stilson, she is now Mrs. C. C. Brown of Burbank, California. It was at Mentone, too, that Winter's son, Louis Victor, died in 1905.

After the death of Louis Victor, Mrs. Winter spent most of her time on the West Coast, where the climate was better for her health. The house on Staten Island no longer hummed with the activity of a large family and many guests. Percy had also left. He embarked upon an acting career, later becoming manager of the Garrick Theatre in Philadelphia. Remaining with his father was William Jefferson. He also pursued a career on the stage, but was able to maintain residence on Staten Island.

In August, 1909, William Winter resigned from his post as drama critic and editor of the *New York Tribune*. Bringing fifty years of newspaper writing to an end, he retired to Fort Hill. Free of the demands of theatre-going, Winter applied himself to the production of a series of volumes devoted to literary and theatrical recollections. He also worked on and published in 1910, *Life and Art of Richard Mansfield*; in 1913, *The Wallet of Time*; and he began a projected five volumes dealing with the works of *Shakespeare On the Stage*.

With Percy gone and Mrs. Winter and Viola in California, Winter was alone on Staten Island except for William Jefferson, who had elected to assist his aging father as secretary and literary agent. Together, in 1915, they made a last trip to the west coast. Winter was then seventy-nine years old. When they returned work was started on what was to be his final contribution to literature, *The Life of David Belasco*. In the midst of this, the world of the theatre again called him to the bright lights of Manhattan. The occasion was the tendering of the William Winter Testimonial. On March 14, 1916, he entered the Century Theatre to receive an ovation from some 3,000 people of the stage and well-wishers.

On July 15, 1916, Winter reached his eightieth year. He ceased to think of the future but patiently continued to write. This he did throughout 1916 and during the first five months of the next year. Then, in June, he took to his bed for the last time. Few friends came to call, because few were left. Ada Rehan, the last of his truly "old friends" had recently passed away. As the month progressed his health declined steadily. Yet he continued to write on the Belasco biography, hoping to finish it before

succumbing. But, at seven in the evening of June 30, 1917, William Winter died. Mrs. Winter had been enroute to his bedside, but her own illness had stopped her journey at Philadelphia, where she rested with Percy. Viola was still in California. Only William Jefferson was with his father when death came.

After cremation his ashes were enclosed in a bronze casket, deeply embedded in cement, beneath a massive block of granite in Staten Island's Silver Mount Cemetery. Still sturdy and erect, the stone is located in the old section of the cemetery at the top of the hill, where Winter had purchased a family plot soon after he had made the Island his permanent home.

Thirty-seven years have passed since William Winter died. Both theatre and its handmaiden, criticism, have changed radically. But the principles which governed and guided Winter's mind in contributing to American letters critical and historical writings on the stage are as valid today as they were when he first put them to use before the Civil War. In addition to his newspaper writings Winter left forty-seven books: criticism, biography, travel, theatrical and literary recollection, and poetry. Of these, his three volume study of *Shakespeare On the Stage* alone makes him as valuable to the theatre of the present as he was to the theatre of his time. Truly, no other writer on the drama has given so detailed picture of the heritage on which our modern drama is founded.

PERSONALITY OF THE MAN

"The personality of William Winter, . . . was winning. Of middle height, with delicate features, blue eyes and dark, silky hair that in his last years turned to silver and crowned him in picturesque disorder, he was an original and attractive figure. His talk, like his written criticisms, was brilliantly original and peculiarly endearing. He was full of substance; often vehement, but never without the most beguiling vivacity; never without a kindling charm."

The Staten Islander, July 4, 1917

SCIENCE NOTES

ROBERT F. MATHEWSON and LEE A. ELLISON

The interesting, educational, and entertaining programs offered by both the Section of Natural History and the Science Seminar are undoubtedly responsible for the increase in attendance experienced at these meetings. A preview of the programs of both for the coming year indicates continued popularity. Trips afield on Staten Island, talks on the botany, zoology, and geology of the Island are in store at the Section meetings; and some of the "deeper" aspects of science will be probed, as usual, at the meetings of the seminar.

Recently a "new look" has been introduced at the Davis Bird Sanctuary at New Springville. A group from the Museum's Section of Natural History set up last fall three more stations for winter bird feeding. It is the plan of the Section during the coming season to carry out a detailed species study of the present Bird Sanctuary and of similar areas nearby. It is felt that by considering the Sanctuary as a wild-life area, making a study of its vegetation, animal life, soil conditions, and interesting features we will be able to help those interested in all phases of nature rather than in ornithology only. In addition, the information compiled should be of great value in the proposed establishment of the entire area as a wildlife refuge, a project on which we are encouraged to believe we will receive City support.

Study material from the Museum's science collections were used many times throughout the year. Particularly heavy use was made of these collections in the identification of specimens brought in by curious visitors.

Our collection of *Calasoma* beetles received special attention from Mrs. T. Gadaspow, a former economic entomologist for the U. S. S. R.'s Department of Agriculture. Mrs. Gadaspow is now working for Dr. John C. Pallister of the Department of Entomology at the American Museum of Natural History. She informs us that our collection has particular interest because it contains species in this genus not to be found in the national collections.

We welcome to our staff Mr. I. C. G. Cooper. His recent appointment as Curator of the William T. Davis Collections assures us that work with our entomological and botanical specimens will once again be carried on with attention to the highest scientific standards. Mr. Cooper still pursues his prime interest, however, in his extensive private studies of algae. He already has new cultures growing from the algae he had to abandon before his recent trip to Europe. In fact, on this trip he did not forget his natural history interests. He speaks of attending the openings and exhibitions of the British Phycological Society at Plymouth, visits to the Algae Department at the British Museum, and an all day trip around the coast of North Ireland, with Dr. Humphrey Barron of Queen's University, looking for algae in the large beach areas to be found between the tide levels.

Edwin Rundletts' innate curiosity in the world about him has led to a series of exciting observations on diseases caused in iris plants by the aphids. The many hours which he has spent in looking through a microscope and hand lens have brought to light much new material on the ecology of this insect. Field observations have revealed that, contrary to earlier opinion, aphids persist long after the first frost and, at suitable temperatures, will actually reproduce. These and other equally significant facts stemming from Mr. Rundlett's careful observations will be presented in a paper to be published in this journal.

In Willard N. Clute's *The Fern Allies* reference is made to an unusual form of lycopod which is common to the cedar bogs of the pinebarren belt of New Jersey, *Lycopodium alopecuroides* or foxtail clubmoss. There is a specific mention of the variety or sub-species *L. alopecuroides* var. *adpressum* reported from Staten Island something like 80 years ago. Last fall, Lee A. Ellison found 20 to 30 plants of *L. alopecuroides* growing in a shallow depression in Buck's Hollow in Latourette Park. Whether this colony is a survival of var. *adpressum* or not will require further study to decide. The eighth edition of Gray's *Manual of Botany* as rewritten by Dr. M. L. Fernald does not list this variety; neither does the *Annotated List of Flowering Plants of New York State* published by the New York State Museum. We have no records

of *L. alopecuroides* having been observed on Staten Island except the reference in Clute's book.

This plant differs in form considerably from the usual conception of a lycopod, best illustrated by the "trailing Christmas greens" of cool northern woodlands. In color a pale green, its prostrate stems are not over a foot in length, branched but with no distinct grouping of leaves. The leaves grow closely appressed to the stem. Its fruiting element is a loose cone or strobile about an inch in length, quite persistent well into the winter.

An appeal for information regarding the gulls on Silver Lake Reservoir by Mr. Morris S. Appelboom, Sanitary Engineer for the Department of Health of the City of New York, brings to the fore a question that has long confronted our local naturalists: "Why do the gulls continually use one of the two basins at Silver Lake, and what is the effect of their presence?"

It appears that at least the latter part of this question may be answered by the investigations of Mr. Appelboom. It has long been known that at least two of the attractions a reservoir holds for the gulls are the number of small fish which, having died as the result of chlorination, serve as food and the presence of clean fresh water in which the gulls can bathe, the temperature of the water remaining constant because of the underground supply.

The contamination of the water, which is the particular concern of Mr. Appelboom, results from the presence of small feathers, body oils, and bacteria from waste materials. This problem is not an isolated one, and its solution has been sought by many communities, particularly along the west coast of the United States. The results of Mr. Appelboom's survey will be presented for further study to the Interdepartmental Board for the Sanitary Control and Protection of the New York City Water Supply.

Excellent weather on December 27, 1953, with good visibility, enabled the six parties who went afield on the Christmas Bird Count to work up a good list. The observers were: Howard H. Cleaves, Roger Christiansen, Lee A. Ellison, Henry F. Flamm, Bruce Gordon, Vera Gordon, Fred W. Hopping, William H. Lea, Arthur Nelson, James L. Whitehead, Charles and Muriel

Pearson, Thomas Schleich, Casimir Redjives, Miriam Stryker, Clara Taylor, and Mathilde Weingartner. All types of habitats were visited so that the Island, with few exceptions, got a good inspection. The result of this effort is found in the impressive list of 67 species, eleven more than the previous count. Four species are completely new to the Christmas counts on Staten Island: pintail duck, wood duck, least sandpiper, and woodcock.

Red-throated Loon	1	Barn Owl	2
Horned Grebe	39	Screech Owl	3
Double-crested Cormorant	5	Flicker	6
Black-crowned Night Heron	15	Hairy Woodpecker	4
Mallard	35	Downy Woodpecker	40
Black Duck	63	Prairie Horned Lark	47
Pintail	2	Blue Jay	15
Wood Duck	3	Crow	239
Scaup Duck	3325	Black-capped Chickadee	37
Golden-eye	28	White-breasted Nuthatch	20
Bufflehead	65	Brown Creeper	1
Old Squaw	14	Winter Wren	2
White-winged Scoter	2	Catbird	1
American Scoter	2	Robin	5
Ruddy Duck	2	Golden-crowned Kinglet	2
Hooded Merganser	2	Cedar Waxwing	8
Cooper's Hawk	1	Starling	594
Red-tailed Hawk	1	Myrtle Warbler	36
Red-shouldered Hawk	2	English Sparrow	108
Marsh Hawk	2	Meadowlark	4
Sparrow Hawk	13	Redwinged Blackbird	47
Pheasant	8	Rusty Blackbird	32
Clapper Rail	3	Purple Grackle	2
Killdeer	35	Cardinal	39
Woodcock	8	Goldfinch	11
Wilson Snipe	3	Savannah Sparrow	4
Least Sandpiper	1	Sharp-tailed Sparrow	1
Sanderling	11	Slate-colored Junco	157
Great Black-backed Gull	29	Tree Sparrow	144
Herring Gull (Estimate)	12,000	Field Sparrow	9
Ring-billed Gull	3	White-throated Sparrow	96
Laughing Gull	23	Swamp Sparrow	17
Bonaparte's Gull	277	Song Sparrow	115
Mourning Dove	16		

BOOK REVIEWS

The Web of Life. By John H. Storer. (Devin-Adair Co., 1953. \$3.00)

Most books on the subject of ecology are in the form of monographs and tend to deal specifically with one or more subjects or fields of ecological investigation. In John H. Storer's *The Web of Life* we have an easily readable and well-illustrated book intended to appeal to the general public. Continuity of theme is carried out in a manner that impresses the reader with the critical interdependence of all living things upon each other and upon the earth's climate, topography, soil, oceans, and atmosphere.

The volume begins with the mineral kingdom, the source of those elements which sustain all organic life. The forces of nature change the primordial rocks to soil in which the lowest forms of life are active in preparing dead mineral matter for higher steps in the development of life. Trees and plants, and the building-up and importance of topsoil are stressed; the man-made perils of destruction of this topsoil, the relationship of inhabitants of the forest to the whole picture of life, the natural balance between species and predators, and nature's check upon overpopulation of any species are emphasized and made clear by photographs.

Eight short chapters are devoted to the part mankind has played in the balance of life; how in many cases he has broken "strands of the web," how it has affected the whole picture of life on this globe, and what mankind must do to restore a balance if the race is to find food for its survival.

This book provokes much serious thought and stresses the often-repeated warning that we cannot go along recklessly plundering our natural resources without paying the penalty; that it is not too late now to check the manmade dangers of erosion, aridity, and wastage of the topsoil. In a forceful conclusion the whole theme of the book is summed up in the words (referring to the earth's arable soil): "Keep it, guard it, care for it — for it keeps men, guards men, cares for men. Destroy it, and man is destroyed."

LEE A. ELLISON

Ernest Thompson Seton's America. By Farida A. Wiley. (Devin-Adair Co., 1954. \$5.00)

To this reviewer, the reading of Wiley's *Ernest Thompson Seton's America* was akin to the meeting of an old friend after an absence of many years. Our enthusiasm for Seton's stories began in the early 1900's when we were presented with his *Wild Animals I have Known* as a birthday gift, and our interest in his writings have not in the least diminished over the years.

The charm of Seton's stories lies in his ability to perpetuate the life histories of his wild animal friends in such intimate, friendly style that they immediately command the interest of all of us who love the out-of-doors. As pure literature, his writings are, perhaps, less important than his story-telling ability in true narrative style, always keenly sensitive to the moods and sympathies of his readers. His drawings of animals were always in excellent detail and composition, and his intelligent observations and systematic records are of inestimable value to all of us who look beyond the commercialism of today's civilization.

Farida A. Wiley has shown well-balanced judgment in her selection of Seton stories for this book. There were so many writings available to her she must have been at wit's end in deciding final selections for publication. We regret her publishers did not use "Selections from the *stories* of the artist-naturalist." as the sub-title on jacket and title page, rather than "Selections from the *writings* of the artist-naturalist." To us, Seton's works will always be stories!

Of Seton's drawings in this book our only criticism is that there are not enough of them. On the other hand, we well appreciate today's rising costs of publication. Some day, we hope to see in book form a complete collection of his pen and pencil sketches, even without descriptive text. A book such as this could well serve as a handy field guide for any nature enthusiast. *Ernest Thompson Seton's America* is a book to read again and again. It's dust jacket should not last long on any library shelf.

CLYDE GORDON

Land Birds of America. By Robert Cushman Murphy and Dean Amadon. (McGraw-Hill Book Co., 1953. \$12.50.)

Audubon Guides. By Richard H. Pough. (Doubleday and Co., 1953. \$5.95).

Songbirds in your Garden. By John K. Terres. (Thomas Y. Crowell Co., 1953. \$3.95).

Although fairly recently North America has accumulated rich and varied research material in the field of natural science, little time was given to it in pioneer days. In bird portraiture our greatest heritage, of course, is the work of John James Audubon.

Robert Cushman Murphy and Dean Amadon, two noted ornithologists of the American Museum of Natural History, after spending many years studying birds and their habits, have added to and strengthened this heritage in their volume *Land Birds of America*. It gives great satisfaction to find that they have put together an artistic book, mainly for laymen, without the highly technical data that belongs in the laboratory or field book. In easy-to-understand style they have included notes on physical characteristics, habits, and range of birds, and many anecdotes concerning the authors' experiences in the field in many different areas.

The book has 221 pages of full color plates, all photographs. One of the most remarkable things about these handsome plates is that the photographers, like Audubon in his paintings, have managed to show the birds in their natural habitats — on their nests, feeding their young, or in flight.

Audubon Guides is a combination volume of the books, *Audubon Bird Guide* and *Audubon Water Bird Guide*. It is too bulky for a pocket guide, but it is a "must" for the library and for research work. The author has included a combined color and size key to small land birds which is of great help to the beginner. Also clearly covered are such important points as overall range, mating habits, and parts of the country where each species may be found. There are interesting write-ups on bird calls, food, and behavior; and mechanical methods of attracting birds, the use of binoculars, and the types best suited for bird study are well-described.

There are ninety-six pages of colored plates, among them a number on hybridized ducks and geese which should relieve the bewilderment of any observer when confronted with such things as a pintail that is not a pintail.

The author is Chairman of the Department of Conservation and General Ecology at the American Museum of Natural History.

In the very readable book by John K. Terres, the main idea is how to attract a great variety of birds to gardens, whether the latter are formal estates or tiny suburban plots. In conversational style, including many anecdotes, Mr. Terres invites all people to become successful garden hosts to songsters anywhere in the United States. The volume begins with the feeding of birds, naming the various kinds of food preferred by different species, and with instructions and illustrations on the making of feeding stations.

There are chapters on how a garden owner can help birds in the building of nests and feeding their young; on the importance of bird baths both in winter and summer; and on the choice of shrubs and flowers to attract many varieties of birds. One of the most appealing chapters deals with a number of experiments in attracting hummingbirds. Some of the following sub-headings will give an idea of the material and the spirit of the book: "Accidents May Thrust Young Birds Upon You," "When to Feed Young Birds," "How Much a Young Bird Can Eat," and "How to Offer Nesting Material to Birds."

Mr. Terres' enthusiasm, his practical suggestions, and the thoroughness with which he has compiled material in the Appendix concerning nesting records, garden plants to attract birds, kind of food, and even the locations of dealers in wild bird food, will make the book *Songbirds in your Garden* a source of pleasure and information for bird lovers everywhere.

The author, an authority in the field of ornithology, is Managing Editor of *The Audubon Magazine*. He has worked as a professional field biologist for the Soil Conservation Service of the United States Department of Agriculture.

CASIMIR F. REDJIVES

Circle of the Seasons. By Edwin Way Teale. (Dodd, Mead & Co., 1953. \$4.00).

People visit the Institute because they are interested in the arts and sciences. Here, in Mr. Teale's new book, art and science appear compactly between covers. There is art in the magnificent photographs and in the word pictures. There is science in the nature stories, and the amateur biologist can add painlessly to his list of the scientific names of living things.

The book is for mystery fans. Can a dragonfly fly backwards? What happened to that last guppy? Just exactly what does an anting bird do with the ants it collects?

Vicariously, armchair adventurers can struggle against gritty gusts looking for eider ducks, or saunter along a swamp edge, or drag a canoe around a beaver dam. Bird-watchers can rejoice at the finding of the long-sought black rail.

Circle of the Seasons is in the form of day-by-day observations, most of which concern the living world around us; but scattered throughout are gems of philosophical thought which make the reader feel that he knows Mr. Teale personally. The literary-minded will enjoy the quotations from earlier nature writers, and they will certainly want to quote from *this* book. Staten Islanders will be gratified with the reference to their own William T. Davis — "that noble and kindly man."

OLIVE L. EARLE

Scientific American Reader. (Simon and Schuster, 1953. \$6.00).

Readers of the *Scientific American* magazine will agree that this periodical has filled the literary hiatus, which existed for so long, between popular magazines of low standards and genuine scientific literature too technical for the average person. The *Scientific American Reader* is a collection of articles that have appeared in the magazine.

On first thought it would seem redundant to reprint such magazine articles in book form, but there is ample justification for giving this book space on the library shelf, if for no other reason than that it eliminates the difficulties of using magazines for quick reference. The best reason, however, is probably to be found in the reorientation of the heretofore isolated magazine

articles into a logical pattern. An example of this is found in the first chapter, "Evolution in Space," under which we find the sub-titles, "Galaxies in Flight," "The Milky Way," "The Universe from Palomar," "The Dust Cloud Hypothesis," and "Radio Stars." Added to this is the almost universal use of simple and direct language, eliminating the need for a scientific technological dictionary. This comprehensible language, plus the format, lends each article added clarity and significance and gives the layman an opportunity to correlate subjects with better understanding.

No one person would be competent to evaluate all the articles in the entire *Reader*. Being particularly interested in animal behavior, however, I would like to commend the excellent work done by N. Tinbergen with the stickleback fish *Gasterosteus aculeatus*, and the chapter "Spider and the Wasp" by Alexander Petrunkevitch. Outstanding authors have collaborated to make possible the presentation of a wide range of profound and specialized interests under such titles as "Structure of the Nucleus," "Photosynthesis," "Multiplication of Viruses," and many others. The dovetailing of such scientific data into the experiences of our everyday living bring these subjects well within the understanding of the layman.

Repeated browsing in this book will do much toward erasing "blind spots" of ignorance about fields of science which are not directly related to the special interests of the individual. The staff of the *Scientific American* magazine is to be congratulated for having produced this excellent text.

ROBERT F. MATHEWSON

Wild Flowers of America. From paintings by Mary Vaux Walcott, with additional paintings by Dorothy Falcon Platt. Described by H. W. Rickett. (Crown Publishers, 1953. \$10.00).

This is a handsome book, one of the handsomest books of the year. The 400 life size color prints, reproduced from paintings of wildflowers by Mary Vaux Walcott (additional ones by Dorothy Falcon Platt) are remarkably accurate and seem to be among the best in American color printing. The colors are true and delicate in contrast to many gaudy books on flowers.

These plates are from the original portfolio set "North

American Wild Flowers" by Mary Vaux Walcott as published by the Smithsonian Institution of Washington. It was while Dr. Charles Walcott was collecting items for the Smithsonian Institution in many parts of the United States that Mrs. Walcott traveled with him and painted wild flowers from nature. Of the thousands of wild flowers only 400 are represented in two groups — the conifers and flowering plants. These representative flowers were selected because they were either the ones hard-to-find, had strange shapes or were common flowers familiar to everyone.

Dr. H. W. Rickett of the New York Botanical Garden, has written a most interesting introduction, a glossary, an identification chart, and a detailed description of the flowers. The glossary explains botanical terms and names which Dr. Rickett thinks are really quite simple since they are based on the classification of plants. Only by the botanical names can the same flower be identified in different sections, for the common names are not always dependable.

This is a splendid book for the layman for it not only gives one pleasure to look at page after page of beautiful pictures and fine old friends, but it also guides him in studying and enjoying unfamiliar flowers. It is a book truly well worth owning.

CLARA M. TAYLOR

A Brief History of Sculpture. By Arnold Auerbach. (Studio-Crowell, 1953. \$4.50)

"Man's desire to shape a piece of wood or stone, to mould a lump of clay into something more interesting and expressive, dates back almost as far as we have record of human life" — and is exemplified in Arnold Auerbach's remarkably comprehensive history of sculpture.

This is no mere history of sculpture *per se* — the author has given us an analysis of the work as a cultural message of the period, the personal theory of the artist, his techniques, influences, and his subsequent approval or disapproval. Also Auerbach has traced the various trends and developments from the Stone Age to present day sculpture and has illustrated each stage with well-selected photographs, giving vividness to the whole.

We are made aware of how the sculptor can communi-

cate the emotional pattern of his day, as in early Egyptian and Indian Art, in which with deep "feelings of fear and insecurity . . . men tended to make sculpture which had a very uniform style of great sculptural power . . . which would objectify for them their strong sense of life and symbolize their wish for certainty and security." And as in present day sculpture, he feels "there is no one style, as we have no one outlook, no one faith." This is a period of chaos when sculpture is influenced by personal introspection (made possible by Sigmund Freud) and scientific developments.

Of particular interest is Mr. Auerbach's opinion of the work of Brancusi, which might clarify his sculpture in the eyes of the layman who refutes its simplicity as "emptiness." Brancusi, according to the author, has "a gift for isolating the pure shape which will express the essential life of every conception . . . his famous 'Bird' . . . a summing up of the idea of all birds . . . his 'Fish' all things which move under the sea."

New meaning has been given to ancient sculpture, and in the chapter, "Retrospect and Prospect," sculpture of the present day is analyzed which should give the layman a deeper, truer understanding — hence enjoyment of sculpture.

JEAN ROLAND

Children Are Artists. By Daniel M. Mendelowitz. (Stanford University Press, 1953. \$3.00).

If you share my opinion, and the author's, that children are people, you will find many interesting facts in this book about their artistic habits. However, if you feel that talent is a rare and special aptitude that is inherited, this book will prove an "eye-opener."

There are several stages in a child's artistic achievements discussed in this book — the scribbling stage when the child becomes more purposeful and systematic as his muscular coordination improves, the symbolic stage when his drawings become more personally detailed, and the beginnings of the creative period when his drawings are more controlled.

Adults should encourage, by sympathetic interest and genuine praise, the interest any child shows in artistic work.

If a young child can be kept working with brushes and paints, clay, color, and other artistic media, there is a good chance that the creative interests will be sustained throughout adolescence. An adult's valuable contribution to the child's development at this time is to provide experiences which will broaden his tastes.

All good teachers hope to develop habits of creativeness and inventiveness in children, rather than a precocious type of maturity. We must not evaluate a child's artistic effort by using conventional adult values. The adolescent period frightens most parents, and the author emphasizes the fact that the arts can help youth, in this period of transition, to add tremendously to a needed feeling of self-confidence.

As we all know, many people belatedly discover their capacities for artistic development. Dr. Mendelowitz points the way to the continuous development of these important artistic powers, so that artistic children may grow into adults who enrich our national community.

LOLA LANDRY GEROW

The Art of Arranging Flowers. By Constance Spry. (Studio-Crowell, 1953. \$1.98).

Every homelover who wishes to use flowers in personalizing her house, however humble or palatial, will want to read the several short chapters making up this handbook. In a simple way Mrs. Spry illustrates the importance of line, proportion, and mass. She shows how an artistic arrangement can adapt itself to furnishings through the choice of containers and a few flowers, grasses, and leaves.

The author points out that color is important in the selection of flowers to suit our moods. To some people white flowers are cold and colorless, but placed in a conch shell with a beautiful pink lining they become an effective highlight. The combination of blue, mauve, and purple flowers in a pewter vase is another example of Mrs. Spry's idea of a beautiful arrangement. Many of these suggested arrangements are illustrated in 25 reproductions in full color, and 24 in black and white.

The chapter on "Practical Points" is especially useful, for it advises how to preserve cut flowers to prolong their beauty,

how to purchase flowers and leaves wisely, and also how to make flower holders.

JEANNETTE K. RICHARDSON

Sidewheeler Saga: A Chronicle of Steamboating. By Ralph Nading Hill. (Rinehart & Co., 1953. \$5.00).

For anyone amongst us today who still might be called contemplative and who has not been accelerated by the machine age so as to lose the ability to stand aside momentarily in time to view and consider what we call progress, the present book provides some very interesting reflections.

Only 150 years ago movement on water was by sail. Then, in 1807 Fulton successfully applied the steam engine to water transportation, and within two to three decades the steamboat took over on river and lake. By 1838 the more severe problems of ocean travel were met by technological improvements, and in 1840 the famous Cunard Line commenced operation with four sidewheelers. The nineteenth century became the age of the steamboat and steamship, with the sidewheeler disappearing from the ocean after a relatively short period.

With the twentieth century came the application of the gasoline engine to automobile and airplane, and the revolution of transportation caused thereby is with us today. The sidewheeler, which was so great an influence in the lives of our forbears only 100 years ago, has practically disappeared. The author of this book lists only the *Robert Fulton* on the Hudson River and the *Ticonderoga* on Lake Champlain.

The reader of *Sidewheeler Saga* will find much that pertains to Staten Island and New York Harbor. It follows the fortunes of Cornelius Vanderbilt, a Staten Islander, from the time he operated his first boat, a periauger, until he amassed a fortune. Of particular interest is the mention of his sitting for a bust by the famous American sculptor, Hiram Powers. (One of the prized possessions of the Staten Island Museum is a Hiram Power's bust of Daniel Low, the gift of Daniel Low Bridgman.)

This lively book, which reads almost like a novel will double pleasure to Staten Islanders because of its colorful subject and the many connections with local history.

JOSEPH F. BURKE

OUR CONTRIBUTORS

JUAN J. BEHM

Geologist. Technical Assistant in Micropaleontology at the American Museum of Natural History. Former Assistant Curator of Science of this Institute.

JOSEPH F. BURKE

Second Vice-President and Research Associate of this Institute. President of the Science Seminar.

OLIVE L. EARLE

Artist-naturalist. Author of children's nature books.

LEE A. ELLISON

Ecological Chemist. Research Associate of this Institute. Nature columnist for the *Staten Island Advance*.

LOLA LANDRY GEROW

Teacher of the Children's Art Classes at this Institute. Former Art Director in New England public schools.

CLYDE GORDON

Director of the Staten Island Zoo.

ROBERT F. MATHEWSON

Curator of Science of this Institute.

CASIMIR F. REDJIVES

Ornithologist. Past-President of the Section of Natural History of this Institute.

JEANNETTE K. RICHARDSON

Past-President of the Staten Island Garden Club, and of the Woman's Auxiliary of this Institute.

JEAN ROLAND

Artist. Studied at the Museum of Modern Art, and with Seymour Lipton and Alexander Archipenko.

CLARA M. TAYLOR

Secretary of the Section of Natural History of this Institute. Teacher at Public School 26.

ROBERT YOUNG, JR.

An ex-newspaper editor, correspondent, and columnist. Great-grandson of William Winter, whose biography he is currently writing.

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Proceedings

of the

**STATEN ISLAND
INSTITUTE OF ARTS
AND SCIENCES**

Volume XVI

Fall 1954

Number 2

PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES

Josephine S. Antonini, Editor

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PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES. Vol. XVI, No. 2, Fall 1954. Published semi-annually in spring and fall by the Staten Island Institute of Arts and Sciences, 75 Stuyvesant Place, Staten Island 1, N. Y. Single copies seventy-five cents. Sent free to Museum members. Josephine S. Antonini, Editor.

NED J. BURNS*

EDUCATOR, NATURALIST, AND MUSEUM EXPERT

RALPH H. LEWIS

Ned J. Burns was only fifty-three when he died (October 12, 1953), but for over thirty-five years he had been creatively engaged in museum work. His life consequently affords a considerable record of accomplishment. It is especially instructive to anyone concerned with the educational value of museums, for Ned Burns was both a product and a producer of museum education. He received much of his schooling through museums, and gave his best talents to the development of exhibits that teach.

He was born in Jersey City, November 13, 1899, and was baptized "Edward." The use of Ned as his first name came later when his reputation as a museum artist was being firmly established. From about 1929 he regularly signed himself "Ned J. Burns." The "J" was for John, the middle name given him at confirmation. He was the only child of Irish immigrant parents. His father, Michael Francis Burns, who became an American citizen in 1885, was from Galway, but of Scottish descent. Ned's mother was Ellen Kelly from Fermoy in County Cork. It is hard to trace the specific influences that his parents had on Ned Burns' career, for time and death have erased the firsthand evidence. Some effects seem clear, but others may only be surmised.

Michael Burns was an expert in the mechanics of telephone systems. The industry was growing and his work called him from city to city. When Ned was a schoolboy, one such tour of duty took the family to California. He never forgot the excitement of finding new trees, flowers, and animal life, which experience helped perhaps in sharpening his awareness of the natural environment around him. From his father it is likely that Ned first learned respect for tools and for precise workmanship. For Ned Burns the ability to put a fine edge on a tool was a matter of pride in himself and admiration in others. He resented the mishandling of tools almost as much as the poor

*The original idea for this article came from W. Lynn McCracken, a friend of Burns for many years. It is especially gratifying that so distinguished a man as Mr. Lewis consented to write it. — Ed.

craftsmanship that resulted. His personal tools he selected with care or made to fit his special needs. When he entered the National Park Service, one of his first skirmishes with regulations was over the purchase of fine tools. Paint brushes made to Federal specifications, for example, differed greatly in quality and price from the fine artists' brushes he needed. He won exception at the start and thereafter managed to keep his shops provided with the proper tools for building good exhibits.

The Burns family moved to Staten Island in the spring of 1911 although there were several later moves. Ned was eleven and probably in the fifth grade. At least one indelible incident marked his grammar school years that followed. He would relate it as an example of the thoughtless cruelty of children and the hazards of growing up. On the way to school the boys took delight in pestering an Italian shoemaker whose little shop they passed. One day a shower of stones against the wall tried the poor man's patience too far. In a rage he rushed out, sharp trimming knife in hand. The frightened boys ran for their lives. As a man Ned Burns recalled the terror of being chased, but his sympathies were with the shoemaker. He was remarkably free from the common prejudices concerning religion, politics, and race, as those of us who worked under him can testify. His manner sometimes concealed a deep reluctance to hurt his fellow men.

Michael Burns left the phone business, probably because of failing health and with his wife helped take care of Mount Manresa, the new Jesuit retreat on Staten Island. This change introduced another strong influence in Ned's life. His close association with the Jesuit fathers was reflected first in the boy's desire to become a priest and always in his firm religious convictions. He saw to it that his own son was educated under the Black Robes.

Ned's father died in 1916, leaving the widow and the sixteen year old boy to support themselves. Ellen Burns, a spirited and capable woman, continued to work at Mount Manresa as house director. She lived to see her son happily married and a success in his chosen profession. Her influence can be judged by Ned's statement made nearly twenty years after her death in 1931. He said that in every important decision he still was guided by his mother's standards.

We do not know when Ned Burns discovered the Staten Island Museum. It was a flint-and-steel experience, however, that kindled his abiding enthusiasm and determined his life work. Certainly William T. Davis had a hand in it, for his influence is inseparable from that of the museum. To Staten Islanders the story of William T. Davis is familiar. A New York businessman commuting each day to his office, he was in his spare time a distinguished entomologist, an outdoor teacher of the first order, and a mainstay of the Staten Island Museum. Boys felt free to bring their finds and questions to Davis at the museum. Through such contacts he led them into unsuspected fields of interest and understanding. Weekends he would take boys on field trips around the island, teaching them to observe nature closely, to wonder about what they saw, and to share his ardor for conservation, the history of the island and its old houses and former land uses. To be one of Davis' boys, as Ned Burns was for years, was to receive a liberal education in a very real sense.

The combination of the Museum, Davis, and his fellow businessman-entomologist-historian, Charles W. Leng, comprised a rare educational opportunity. Ned was essentially right when he called it "Davis and Leng University." He himself was clear evidence that it could foster an alert, well-informed mind. In him an unfamiliar plant aroused an insistent curiosity. He showed a quick eye for cocoons and birds' nests, and he could usually name any passing butterfly and pronounce it as rare or common in that part of the range. Throughout his life he kept this keen but quiet perceptiveness of nature. In addition, he seemed equally adept at grasping and handling the physical evidences of history. To visit an historic site with him was to see the pieces fitted together into a living picture. Better training for his later work in the National Park Service would be hard to imagine.

Collecting, mounting and identifying insects were the first museum skills Ned Burns mastered, and the Staten Island Museum was a good place to learn them. Under the guidance of Davis and Leng he passed from general collecting to concentration on a single group. His speciality became flies of the family *Dolichopodidae*. He was a young but active member of the New York Entomological Society. He added many specimens to the Museum collections. The stage was set for Ned Burns to become a professional entomologist, and the next step would be Cornell

University, the leading center for entomological training. Ned wanted to go, but his father's death closed the door. Within a month after Michael Burns died his son had taken a job. Dr. Frank Lutz, Curator of Entomology at the American Museum of Natural History, hired Ned for the summer to pin and label insects in the museum collections. Ned was sixteen, so at the end of the season he presumably returned to high school, but before he had finished school, he felt the need to help support his mother. This delayed his graduation from Curtis High School until June, 1919.

Necessity and opportunity were in happy combination when Ned Burns left school to work. The Staten Island Museum appointed him a guard in April, 1918, and he held this position until August, 1923. These were years of professional training, for he functioned not only as a guard, but he did a janitor's work, he conducted visitors through the Museum, became a skilled projectionist, learned to give talks, took part in the Museum's club program, and above all tried his hand at preparing exhibits. It is worth noting how these experiences served in later years. When Ned Burns had to organize maintenance and guard forces for the Museum of the City of New York, he worked from intimate knowledge of their functions. When during World War II he was responsible for the slide and film collections of the National Park Service, he set high standards based on his own familiarity with projection problems and methods. He fitted easily into the interpretative situation of the Park Service, because the teaching methods of the naturalists and historians were close to those he had learned to use in the Staten Island Museum.

These years gave him a good general background in museum work, but they also turned his interests definitely toward exhibit preparation. In this, his active mind and his well-endowed hands could collaborate most effectively. It is said that Ned visited the Brooklyn Children's Museum one day and saw the miniature groups made by Dwight Franklin. The term *diorama* was not applied to such groups until later. Characteristically, he returned to Staten Island determined to make better ones for his own museum. The first group he attempted was an Indian camp-site filled with peaceful, everyday activities. It was designed to teach and was placed on display November 20, 1920. His second diorama was completed fifteen months later. For this



"Indian campsite on Staten Island"
 one of the first dioramas made by Ned J. Burns.
Photograph by Robert M. Leng

he chose a more dramatic subject, a specific historic incident — the Indian Massacre of 1655. Nine months later a third group was ready, also an historic incident. It depicted the Revolutionary conference in the Billopp House.

In these three groups, the first two of which are still on display in the Museum, he explored many of the basic problems of diorama construction. He experimented with the problems of perspective and lighting in outdoor and indoor scenes. He tried emphasis on processes, action, and mood. Undoubtedly he tried many different materials and structural methods. One of the first things he must have learned about dioramas was that he needed more training in art and its techniques before he could achieve the quality he desired. Many, many times in future years people were to ask him how to build dioramas. He could only answer that there is no formula to follow, no process to be de-

scribed, but that to create a good diorama one must be a capable artist in painting and sculpture. When one has mastered these techniques, he said, one does not need to ask.

Ned Burns studied hard to improve his preparation techniques. By attending night classes he completed a four year course in sculpture, painting, and design at the New York School of Industrial Arts. He also studied at the Art Students League. The teacher who probably led him farthest in art was Charles E. Tefft, the sculptor. Ned found the sculpture of St. Gaudens and the historical drawings of Howard Pyle particularly instructive. After his formal training in art he continued to paint landscapes for a number of years, and he found enduring satisfaction in modeling miniature figures to the end of his life.

In the summer of 1923 Ned left the Staten Island Museum to take a position as preparator at the American Museum of Natural History. It was a well-earned opportunity for advancement. The Staten Island Museum had given him a basic introduction to museum work and a chance to find his special bent; the American Museum offered an unsurpassed chance to work with leading experts in many types of exhibits. The museum was building displays of outstanding quality and was developing new techniques.

Ned Burns spent the next five and a half years in the American Museum, serving it well, and developing his own talents accordingly. He acquired skill in taxidermy; he learned the intricate and varied methods of making foreground accessories — trees, rocks, leaves, flowers; he became expert in the techniques of molding and casting; he produced life-size figures for anthropological exhibits; and he made miniature groups illustrating American Indian life. How much Ned profited may be judged by the versatility and skill of his exhibit work from this time on. An indication of the degree of skill he achieved in standard methods were the many requests that he make casts of pathological conditions on hospital patients.

The American Museum gave him more than technical skills. In preparing exhibits he worked with leading scientists to translate their ideas into visual form, and thus learned a good deal about the subject matter of the exhibits. He was able to observe the operation and management of a large institution with high standards in terms of materials, craftsmanship, artistic qual-

ity, scientific accuracy, and educational utility. His contacts with the education department of the museum were important personally as well as professionally. Nancy Alice True, a young biology teacher and graduate of Brown University, had joined the American Museum staff to work with school classes, especially those for the blind. Ned married her in 1930.

Throughout his years at the American Museum Ned Burns maintained his active interest in the Staten Island Museum, serving as secretary of its Nature Club until 1929, and frequently joining its periodic field trips on the island.

Late in the 1920's a new kind of museum was being born in New York City. Several prominent citizens felt that the people of the city should be familiar with its history, but no existing institution was equipped to do the educational job required. These leaders set out, therefore, to organize the Museum of the City of New York. Since educational exhibits were the primary concern in telling the story of the city, the founders searched for someone to prepare them even before a building was erected. Ned Burns was thereupon appointed chief preparator and began his new assignment early in 1929. Setting up shop in the old Gracie Mansion, he started building exhibits which are justly renowned. Today, a quarter of a century later, the museum and its exhibits remain outstanding examples of what historical museums can accomplish in public education.

Of all Ned's work at the Museum of the City of New York his dioramas are the best known. They reveal his maturing skill and great versatility. The miniature interior of a 5 and 10 cent store is a marvel of detail; the street scene after the big blizzard is cold and moody; others show historic incidents of quiet drama; and still others evoke a whole period in a single scene. It was characteristic that he found spare time to become well acquainted with the progressive theatrical organizations in New York. Stage lighting, good directing, and fine acting all taught him things which could lead to better dioramas.

As chief preparator, Ned had other duties besides designing and constructing dioramas. One of the first was to make an accurate scale model of New York City as it was in the mid-17th century. Existing information on every lot and building, pinpointed to the year represented, had to be assembled and studied; and streets, houses, fences, canals, wharves, and other physical

features had to be constructed in proper scale. The model is still worth a visit to the museum.

Building exhibits for a whole new museum was not a one-man undertaking. Ned selected and trained young men to help him. They were the first of an impressive list of Burns-trained museum men who are in some measure carrying on his professional or technical standards, working as preparators, curators, or directors in national, state, and local museums. It is impractical to compile a complete list, but nearly two dozen of his former assistants now employed in museums come readily to mind.

The new museum had many problems, and its chief preparator had corresponding capabilities. Ned was made business manager and later assistant director while continuing in charge of exhibit preparation. These wider responsibilities gave him valuable experience, including the essential matters of budget and everyday management, the fine art of dealing with city officials, the hiring of guards and maintenance employees, and the provision of school services. In carrying out his duties Ned Burns became thoroughly acquainted with the *modus operandi* of city politics from the ward up to City Hall. Later, when he became an employee of the Federal government, he scrupulously avoided party politics and political influence to gain personal or professional advantage, but his knowledge of practical politics proved a useful tool. His colleagues found him a strong ally or a capable opponent in the give-and-take of an active government agency. He knew the rules and could play the game hard.

Ned Burns worked at the Museum of the City of New York for six and a half years. Then his services were obtained by the National Park Service. The men who first undertook to interpret for visitors the magnificent scenery and natural phenomena of the national parks soon found they needed more than words. They discovered that small museums actually located in the parks supplemented very effectively their guided field trips and talks. During the 1920's the National Park Service, with strong support from the American Association of Museums and the Laura Spelman Rockefeller Memorial, developed museums in most of the larger western parks. In 1933 a number of historical reservations in the East, formerly administered by the War Department, were transferred to the Park Service. It was soon found that these battlefields and historic buildings needed visual

explanation as much as the scenic parks. Dr. Carl P. Russell, who had been responsible for much of the progressive museum work at Yosemite and Yellowstone, was assigned the job in Washington of getting museums for the eastern parks. Wanting a man of outstanding abilities and experience, he turned to Ned Burns, who took up his duties on June 3, 1935, as Superintendent of Field Laboratories, with headquarters at Morristown National Historical Park, New Jersey.

The first problem was to organize and equip a central exhibit preparation laboratory. Morristown was picked as the location for several reasons. A suitable building was available, a new park museum was under construction, and New York City was close enough to provide a reservoir of artists and technicians. Within a few weeks exhibits were in preparation. Among the first were two historical dioramas for the Morristown Museum which, when finished, combined the drama, the accurate detail, and the attractiveness which had marked Ned's work at the Museum of the City of New York. They demonstrated the competence of the new laboratory. In making them, he had not only maintained his standards, but had trained a new staff in the exacting work.

Soon the Morristown laboratory was pioneering in another type of historical exhibit. A museum was being prepared for Vicksburg National Military Park, with special emphasis on the famous Civil War campaign and siege. This museum was to present a continuous narrative, in which each exhibit was to be a chapter. Some chapters bore little or no relation to the historic specimens that museum workers know how to use, but instead there were exhibits on the hard-to-illustrate causes of the Civil War and on military strategy. The Vicksburg Museum was an experiment, and the beginning of a long period in which Ned Burns' laboratory continued to tackle hard problems and seek new solutions.

Within a year Ned was transferred to Washington with a new title, Chief Curator of the Interior Museum. Actually he still had general responsibility for the Morristown laboratory and for the developing exhibit work in the eastern parks. The Department of the Interior, however, was constructing a large new office building, with one whole wing reserved for a museum. Again Ned Burns was faced with exceptionally difficult prob-

lems. For one thing, the space was designed for offices. To fit a modern museum into the long narrow wing, with its many supporting columns, was no easy matter. It was accomplished through a series of alcoves and special cases designed to fit into the finished furred walls and still permit some flexibility in arrangement. The subject matter presented even greater difficulties. For the first time a government department was undertaking to explain its policies and program to the public by means of permanent exhibitions. It is not easy to show in simple visual form the complex functions of a governmental department, but the Interior Museum was opened in less than two years after Ned got to Washington.

In June, 1938, Ned Burns was made assistant chief of the National Park Service museum program. The Morristown laboratory had been moved to Washington, where a smaller exhibit shop (which had been building topographic models as part of a Civilian Conservation Corps project at Fort Hunt, Virginia) was combined with it. In Berkeley, California, another large laboratory served the needs of the western park museums. As a matter of fact, Ned was now serving as Chief of the Museum Division, since Dr. Russell had been called to other duties; but the time required for Civil Service action delayed his receiving the title until May, 1939. From then until his death he was Chief of the Museum Division (later Museum Branch) of the National Park Service.

When Ned joined the Park Service, it had between twenty-five and thirty museums; he left it with more than one hundred fourteen. This was the climax of his career. He created museums that were of such high quality and served their purpose so well that more and more park administrators wanted them. His personality had a hand in it too. His inspection trips gave him first-hand contacts with many park superintendents. The confidence and respect they bore him were important elements in park museum growth.

After the Interior Museum was opened, work in the East was concentrated on another large museum. The site of colonial St. Louis, in the central river front area of the modern city, was being cleared as the Jefferson National Expansion Memorial. A principal feature of the memorial was to be a Museum of National Expansion. Interpreting one of the great themes of Ameri-

can history, the exhibits were to illustrate and explain the many aspects of the westward moving frontier as it advanced from the Alleghenies to the Pacific. Under Ned's leadership plans were prepared for the main exhibit halls, and enough exhibits were completed before the war to open a temporary summary display in the Old St. Louis Courthouse overlooking the memorial site.

While work on the Museum of National Expansion was in progress, funds were unexpectedly made available to publish a manual for park museum workers. Exhibits for the park museums were prepared by the professional staff of the laboratories under Ned Burns' direction, but they were maintained and operated by naturalists or historians in the parks. These men were specialists, but not in museum work. Ned could visit the field areas occasionally, but a ready source of reference was needed to help the men meet their day-to-day museum problems. The result was Ned Burns' *National Park Service Field Manual for Museums*. The edition was soon exhausted, and after more than a dozen years it still is in demand. Ned hoped to revise it for a second edition and was working on it as time permitted. The National Park Service plans to carry out his desire.

World War II interrupted all museum development in the parks. Both the eastern and western laboratories were closed, and the National Park Service offices moved to Chicago. With a minimum staff Ned Burns was faced with the problem of preserving the national collections scattered in parks across the country. Some had to be moved from critical military areas; others had to be kept on display where service men and war workers sought recreation and perspective.

One important product of the war years was Ned's personal campaign to obtain adequate preservation for the growing collections entrusted to the National Park Service. Few people in the Park Service understood how big the problem had grown. Proper storage and treatment were expensive, and there was no provision in budgets or appropriations for this new responsibility. With patient sagacity Ned Burns kept the preservation needs before administrators until regular appropriations for the purpose were made. Then he initiated and staffed a program of continuous and emergency care. He familiarized himself with the latest scientific methods of preservative treatment. Setting standards as high in this as in his exhibit work, he insisted that important

specimens be treated only by properly trained specialists. He also saw to it that all materials used were of known composition so that the chemical and physical effects could be judged. He became much interested in the organization of the International Institute for the Conservation of Museum Objects, which promised to raise the standards of professional work in the field. Fittingly, he was invited to become a fellow of the Institute, but his death intervened.

At the end of 1946 he reopened the eastern museum laboratory in Washington and began again the active development of park museums. The first problem was to build and install exhibits in museums that had been constructed before the war. Next there was the problem of modernizing museums that had been in use ten to twenty years. In between there were occasional new museum projects. In the years that followed the museums completed included the Manassas National Battlefield Park Museum, the Guilford Courthouse National Military Park Museum, the Chickamauga Battlefield Museum, the Ocmulgee National Monument Museum, the Ochs Memorial Museum on Lookout Mountain near Chattanooga, the William H. Jackson Memorial Wing at Scotts Bluff National Monument, and the Custer Battlefield Museum. Ned was active in all of them, but perhaps the Custer Museum pleased him most. "Custer's Last Stand" was a diorama subject that dared his skill, for it had been represented many times, each attempt compounding the errors of its predecessors. He set out to recreate the scene as accurately and as dramatically as historical research would permit. The result was one of his finest dioramas. His last field trip carried him back to the Custer Museum.

The National Park Service offices were moved from Chicago back to Washington late in 1947. The transfer involved much hard work for Ned. When the job was done and his family on the way by train, he started East with the family car. He had been fighting a cold that proved to be pneumonia, and the consequence was a serious auto accident. Although Ned escaped without apparent injury, he seemed less robust in the remaining years.

The last big project which Ned Burns completed was the Zenger Memorial Room in Federal Hall Memorial National Historic Site. The Old Subtreasury Building on Wall Street is on the



Ned Burns at work on the figure of Alexander Hamilton for the diorama of the trial of John Peter Zenger in the Zenger Memorial Room of Federal Hall.

site of Federal Hall where George Washington was inaugurated as our first president and where the Federal government under the constitution was organized. On this same site New York's City Hall had stood in 1735 when the printer, John Peter Zenger, had been imprisoned, tried, and acquitted in a trial that did much toward establishing freedom of the press in America. American newspapers wished to commemorate Zenger's courageous stand and provided the Park Service with funds for building a series of exhibits in Federal Hall Memorial. Freedom of the press is an intangible idea to be captured in exhibits. Few original objects associated with Zenger or his trial remain. In spite of these difficulties Ned Burns made of the Zenger Memorial a dignified and inspiring room. Exhibits tell the story of Zenger's arrival in New York as an immigrant boy; of the royal governor's tyranny and colonial defiance of it; of Zenger's newspaper and his imprisonment on a charge of seditious libel; of his trial, the intervention of Andrew Hamilton, and the acquittal; and of the far-reaching influence of the case.

Ned Burns' skills in exhibit preparation were always in demand, and the record of his work includes a long list of exhibits built outside his regular, full-time job. He took on the burden of this extra work, partly because each new exhibit was a challenge to him, but also because museum salaries leave little margin for rearing a family of three children. Among the exhibits he built under contract were a series of dioramas for the Detroit Children's Museum and the Castine Museum in Maine, displays for the Sesquicentennial Exposition and the Century of Progress Exposition, two large traveling models for International Business Machines, and two detailed scale models of Colonial Williamsburg. One of the extra jobs he undertook helped engender an interest he followed for many years. A Franciscan church in New York had him prepare a diorama setting for the *crèche* figures it had acquired. He was struck by the similarity between *crèche* and diorama techniques and, feeling that the one was the forerunner of the other, he explored their history as far as he could.

Ned Burns was a craftsman, justly proud of the work of his hands. He was a hard and conscientious worker, setting as fast a pace and as high standards for himself as for others. He was a good administrator, training his men to produce their best, patient with their shortcomings, thoughtful of their troubles. He knew museums and their problems and did his full share in making them better. Much of his work remains to honor him: his scientific collections in the Staten Island Museum; his splendid exhibits in many different museums; an effective museum organization in the National Park Service; and a manual which is a frequent source of reference in museums around the world. The value of his contributions was recognized. He was made a fellow of the British Museums Association; he was awarded posthumously the silver Pugsley medal of the American Scenic and Historic Preservation Society; the Department of the Interior granted him its Distinguished Service Award, also posthumously; and the American Association of Museums established a Ned Burns Memorial Fund to finance publications in his field of interest. But perhaps the recognition which pleased him most was the invitation to address the Staten Island Institute in the spring of 1953. It was a warm homecoming that rounded out his life's work.

DIATOMS – FOR STUDY AND PLEASURE

JOSEPH F. BURKE

Chinatown and the Bowery! Again the white-capped barker of New York is seeking patronage for his rubberneck tours into this interesting section of Manhattan. Again out-of-town visitors roll on rubber to that locality so given to an air of mystery. During the war years tours had to go on foot through tourist spots, traveling from one to another by elevated, subway, and even on the city ferries. But now the large sight-seeing buses again carry their passengers.

Let it not be assumed that all New Yorkers know their Chinatown. It is in reality but another section of the large city whose sons went to war and whose children, with children of other racial origins, are part of the city school system. Upon growing up they are the clerks and owners of the shops that tourists patronize, tourists who often wonder if they will have difficulty in making the salesman understand English. But some New Yorkers do know Chinatown and that business is conducted there as it is elsewhere in the City.

The exotic foods that hang in the windows of the grocery shops are exciting to the imagination. Why should they not be? Let us stop in this store at Pell and Mott Streets. We have come for a can of fish. The scientific name of the fish comes readily to the tongue, but its Latin terminology will not be understood by the young Chinese clerk, even though his English is as our own. Nor can we call it the goby, its popular name. So we explain to him that we want a can of fish, something like the sardine in the packing, but coming from China. A can brought from the shelf proves to be what we are after. Upon the label are some English inscriptions, in addition to the Chinese characters, informing us that the can came from canneries in or near Hong Kong.

The ways of the scientist are curious and, to the layman, at times a little mad. Why did we travel to Chinatown for canned gobies? These small fish occur in tremendous numbers on the coast of China and apparently find a rich living on the mud flats of the coastal region. Fortunately for the investigating scientist they are packed entire, with stomachs intact and full

of their last delicious meals. In the laboratory the can is opened and the fish removed one at a time. This one is fat and chubby! it will have a full stomach. This stomach proves a treasure chest for the scientist. Into it are crowded thousands of shells of silica, the inorganic remains of the thousands of microscopic plants, *diatoms*, upon which the goby had fed before being caught, canned, and started on his long last journey to New York Chinatown.

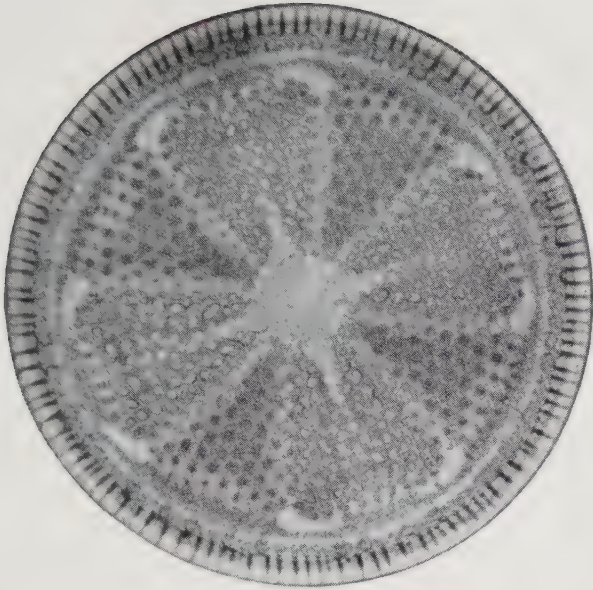
DIATOMS ARE PLANTS

The diatom is a microscopic plant, consisting of one cell. Some cells occur singly. Others are joined in filaments or form aggregations in or by means of a gelatinous substance. These aggregates or colonies result in the term "colonial forms." Those diatoms which occur singly and unattached may or may not have the power of motion. This ability to move freely in water occurs in many species in a number of different genera. Movement in the colonial forms is rather infrequent but does occur in some instances. On first acquaintance, one is often puzzled as to whether or not diatoms are under observation, so varied are their forms and occurrence.

All diatoms have in common a siliceous shell or *frustule*. Except among the frail, floating forms, this shell persists in fossil deposits. It remains also after living forms are put through an acid cleaning process for study. It is the study of these shells that concerns the diatomist engaged in taxonomy, that branch of science that embodies the principles of classification. The scientist must first classify and name his organisms, so that other scientists may know of which he speaks or writes.

OCCURRENCE OF DIATOMS

The occurrence of diatoms is widespread. In the open ocean plant life is at or near the surface. Diatoms in such areas are floating forms. To float freely the weight of the shell in relation to its size is greatly decreased. This is achieved by long, frail appendages, or *processes*, and by a considerable thinning of the cell walls. These diatoms occur often in great abundance and are known as *plankton* diatoms. The term plankton is applied to other organisms as well as to diatoms. Sometimes the



Actinoptynchus heliopelta Grunow. A fossil diatom that is regarded as an Index Fossil of the Calvert formation, a bed of diatomaceous earth that extends from southern New Jersey through Delaware and Maryland into Virginia.

large floating masses of plankton diatoms are relatively pure, but often the diatoms are mixed with other plankton organisms, including the minute animal life of the sea. The oceanic plankton has often been referred to as the ultimate food of the oceans, the beginning of the food cycle that feeds all the animals that inhabit the sea. Some of the whales feed directly on plankton, but many of the denizens of the sea feed on other animals that in turn eat plankton. Plankton is gathered by deep-sea expeditions, and the study of the plankton diatoms has been pursued largely by specialists. While plankton can be collected near the coast to some extent, other diatoms usually occupy the attention of the land dweller.

Diatoms of the continental shelf, that area of relatively shallow depths along our shore lines, are known as *marine* diatoms and can be collected along the shore or from small boats. In the inlets along the coast, where fresh water joins the salt (resulting in brackish water), other diatoms occur. These are known as *brackish water* diatoms. The habitat of the *freshwater*

diatoms is from inland to practically the shoreline. Brooks and rivers entering the sea bring down freshwater diatoms and under suitable circumstances, such as at tide-gates, a single gathering may include fresh and salt water forms. However, diatoms are sensitive to the salt content of the water in which they occur, and the freshwater diatoms would not continue to exist after reaching the ocean. It is among the diatoms from both shore and inland localities that the land dweller finds a ready source of material to engage his scientific interest.

COLLECTING DIATOMS

The method of collecting diatoms in the field varies with the locality and the diatom flora. The oceanic plankton is collected by means of a tow net made of Swiss bolting cloth. The extremely fine mesh of this cloth allows the water to escape while directing the plankton into a collecting vial at the end of the net. The net is usually towed from a boat, but sometimes it is possible to suspend the net from a dock at a time when the tide rushes past, in which case the water and not the net is the moving element.

Marine muds are sometimes rich in diatoms and may be dredged from the bottom. Often, with changing tides, surface diatoms are concentrated in tide pools, in sand ripples, in tidal ditches on salt marshes, and like locations. In the form of brownish foam or even higher concentrations of alga-like nature, a collection can be transferred by means of a spoon to a collecting bottle. The red seaweeds are often rich in attached diatoms, which may be dislodged by placing the seaweeds in a container of water and adding a small amount of hydrochloric acid. The seaweed is then beaten with a glass rod and lifted from the container, leaving the diatoms in the liquid. Diatoms also may be scraped from piling, the bottom of floating rafts or boats, or from buoys. On piling they are exposed at low tide.

Freshwater diatoms occur in ponds, streams, in small isolated pools, and even on consistently damp spots. They may be scraped with a spoon or floated into collecting bottles. On pond plants and sphagnum moss they may be collected by squeezing the plants over a wide-mouth collecting bottle.

When brought indoors the living diatoms can be ex-

amined under the microscope with considerable interest. After such examination a small amount of formalin added to the water will kill the diatoms and allow them to settle to the bottom, after which procedure the excess water may be poured off. Until further treatment the formalin will prevent decay and odor from organic material in the collection. Otherwise, marine collections especially may become odoriferous. Collections from acid bog waters, on the other hand, seem to stay sweet.¹

CLEANING AND MOUNTING DIATOMS

For study under the microscope, diatoms are cleaned with acid. The operation consists of several stages. The formalin and salt are washed out by two or three washings and settlings in filtered fresh water. To the last washing is added about five per cent of hydrochloric acid to dissolve any calcium carbonate in the gathering, but this step is not necessary usually with freshwater collections, unless from limestone regions.

After the foregoing comes a cleaning with sulphuric acid, a process necessitating unusual care, which is described elsewhere.² The processing of diatoms is really a laboratory operation, and chemists and others with laboratory experience often do it very well. However, almost anyone, by careful application, can follow the process successfully.

With the cleaned diatoms on hand, the mounting operation is relatively simpler. Those with other slide-making experience will not have much difficulty. The complete details of making strewn diatom slides are described in another paper.³ As the refractive index of the silica of the transparent diatom shell is close to that of glass and Canada balsam, it has become customary to use mounting media of higher refractive index. This results in an image of greater contrast when the diatom is viewed under the microscope.

LITERATURE OF DIATOMS

With the mounted diatom slides prepared, recourse is now had to the literature for purpose of identification of the species. Here a peculiarity of microscopic plants enters the picture. Diatom species are not localized, as are the larger plant

forms, so that a publication on the diatoms of Europe, for instance, may be of great value in identifying diatoms from North America. The most comprehensive work on North American diatoms is by Charles S. Boyer,⁴ which includes the living diatoms known by him to occur or to have been recorded as occurring in North America. Descriptions are given of all recognized species with references to illustrations, though the work itself is not illustrated. The same author had previously published an illustrated work on the diatoms of the Philadelphia area,⁵ which the beginner will find more immediately useful. Subsequent publication by other authors has added further species to the known North American flora.

A most useful textbook for the freshwater diatoms is one written by Friedrich Hustedt on the flora of Central Europe.⁶ The illustrations are splendid, and the descriptions are in German. With this book alone, the collector of freshwater diatoms will be able to identify the bulk of his species. The key to the whole of the diatom literature is an Index prepared by Frederick Wm. Mills,⁷ which is available in the larger diatom libraries.

REFERENCE COLLECTIONS

The largest concentration of diatom slides, including the collections and types of many early British workers, is at the British Museum. More accessible to collectors in North America is the New York Botanical Garden, which has nearly 20,000 slides in addition to an extensive diatom library. At the Philadelphia Academy of Natural Sciences is another large collection, which includes that of Charles S. Boyer. This institution also has an extensive diatom library. In the U.S. National Museum, at Washington, D. C., are the collections that formed the basis of the work of the late Dr. Albert Mann. In California the center for reference material is the California Academy of Sciences, in San Francisco, from which originated the work of Dr. G. Dallas Hanna, specialist in fossil diatoms.

DIATOMS FOR STUDY AND PLEASURE

One who studies the diatoms is referred to as a diatomist. The diatomist is a botanist, though by many he is thought of more as a microscopist, and with good reason. Present knowledge of

the diatoms has been accumulated in the past hundred years, the period during which the achromatic microscope has been in existence. For some fifty years previously, diatoms were known and investigated, many being given names, but diatomists of that period were not agreed as to whether they were dealing with animals or plants.

It might be said that the microscopist became the diatomist and the diatomist became the botanist. This is true today as in the past, for only occasionally does a graduate botanist turn to the study of diatoms. It is to be regretted that this is so, for the botanist would find the morphological study of the diatoms a fascinating field, a field where so far most of the important work has been done abroad. The results of such morphological studies would assist greatly the diatom taxonomist, who has relied almost entirely on the structural characters of the siliceous shells, without reference to the living cell.

In the determination of species by structural characters of the shells, the diatomist has been dependent upon the use of the microscope, often to the utmost of its capacity. A thorough knowledge of the optical and mechanical manipulation of the microscope is, therefore, of the greatest importance to the diatomist seriously concerned with diatom taxonomy. The trained microscopist knows there is no perfection and that his instrument is a compromise of various optical laws. If his means permit, he seeks an instrument that mechanically is of the best construction, with optics corrected as highly as optical art allows. Such an instrument is one of beauty and inspiration, an approach toward perfection in a product of the mind and hands of man. With it, he turns to the work of nature, where in microscopic form he witnesses again a striving for perfection, perfection in design and symmetry—even though nature, like man, often falls short.

Not all diatomists are engaged in taxonomy, and the study of diatoms through other approaches has long appealed to men of ability in various occupations. In the microscope many professional and business men find an avocation that acts as a release from a strenuous life, that provides a hobby, if you will, for which no apology, explanation, or appeal for sympathetic understanding need be made. It is one of the great exploratory instruments of mankind, with a strong appeal to the active mind.

There is untold pleasure in the microscopical observation

of diatoms, even when pursued without serious purpose. As the botanical gardens are open for the esthetic enjoyment of the many, as well as for the few who deal with flowers as objects of scientific research and classification, so the diatoms await those users of the microscope who seek only pleasure. Arranged slides by the masters of diatom mounting long have been famous as microscopical preparations of great beauty. The demand for these was created by those who sought pleasure in the microscope and the diatoms.

But pleasure alone will not satisfy the individual whose approach is intellectual. For him the study of diatoms is a field in which there remains much important work to be done, with room for many more students. Those who are persuaded to enter the field will find it rewarding in many ways.

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SCIENCE NOTES

ROBERT F. MATHEWSON

Two unusual "finds" by Lee A. Ellison came to our attention during the month of August, 1954. The first in importance was the discovery on the 27th of a bird very rare for this part of the country, the avocet. It was seen on the shallow discharge pond at the Consolidated Edison's Arthur Kill Generating Station. It had been seen during the previous summer for only a few minutes but could not be identified with certainty. On the August 27th occasion it was seen by five different bird observers and was photographed. This is the first known authentic record of the appearance of the avocet on Staten Island. The last recorded occurrence of the bird on Long Island was in 1908 at Orient. It has been seen at the Hawk Mountain Sanctuary near Lenhardtsville, Pa.

The second item of importance was the finding of a new stand of over twenty plants or groups of plants of *Clematis ochroleuca*, the erect silky leather flower, at a locality southeast of Richmond, Staten Island, noted and described in the confidential records of the Museum. This and a nearby stand, which has been known for some twenty years, constitute the only occurrences of this unusual and very rare plant on Staten Island, and it is doubtful if the plant survives elsewhere in New York State, New Jersey, or Delaware. Our two colonies are, unfortunately, in a spot which may mean their eventual destruction.

Twenty-three different varieties of snails were collected by the members of the New York Shell Club during their Staten Island field trip in the month of May. Specimens of the scarce species *Mercenaria mercenaria notata* were taken.

Of particular interest, in this field of study, is a note by Mr. George Wilmott in which he reports: "Last summer (1953) a species of snail new to the fauna of Staten Island was discovered in an artificial pond in Princes Bay. It was identified as *Lymnaea columella chalybea*. Large numbers of them lived through the winter and are present again this year. Probably they were introduced on aquatic plants. It is to be expected that they will be found in other similar fish ponds and may eventually escape to the Island's natural ponds."

The royal tern, a bird which is usually not found north of Virginia, was observed at Marine Park Beach immediately after the passing of the hurricane "Edna" on September 11th. The characteristically deeply forked tail, bright orange beak and white area across the forehead were noted by Mr. Henry Flamm of the New York Conservation Department. The observations were made with a 30x telescope at a distance of about 100 yards.

Periodically, as material from reports and observations accumulate, especially in the meetings of the Section of Natural History, we abstract these records for the benefit of natural history students and for our own easy reference. In the present abstraction, because of limited space, we have sought to list only observations of new or rare items or survivals of species now becoming locally rare.

As in the past, the abbreviation FT indicates that the species was seen by several observers on a field trip. Initials only of the more frequent individual observers are given as follows: CC — Cleeve Cooper; HC — Howard Cleaves; LE — Lee Ellison; RM — Robert Mathewson; ER — Edwin Rundlett; MW — Mathilde Weingartner; and CR — Casimir Redjives. The abbreviation RF indicates that a species or record is discussed in detail in the Reserve File, which is in the custody of a committee handling natural history subjects of an investigative or confidential nature.

TREES

- Birch, red or river, *Betula nigra*; Signs Rd., LE 11/29/52 RF;
Amity Pl., LE 11/29/52 RF; Foster Rd., LE 4/9/53 RF
Buckeye, bottlebrush, *Aesculus sp.?*; Von Briesen Pk., ER 4/11/53
Epaulette-tree, *Pterostorax hispida*; Von Briesen Pk., ER 7/10/54
Oak, English, *Quercus Robur*; Von Briesen Pk., ER 7/10/54
Pagoda-tree, *Sophora japonica*; Von Briesen Pk., ER 7/10/54

HERBACEOUS PLANTS

- Blackberry, sand or knee-high, *Rubus cuneifolius*; Charleston,
LE 8/21/52 RF
Gentian, blind or bottle, *Dasystephana Andrewsii*; Bucks Hollow
LE 11/17/53 RF
Cardinal flower, *Lobelia Cardinalis*; Wolfes Pond Pk., FT 8/9/52
Erect silky leather flower, *Clematis ochroleuca*;
distribution and new stand, LE 3/31/50; 8/8/54 RF

Leek, wild, *Allium tricoccum*; Rich. Hill Rd., LE 7/30/50 RF
Leek, wild, *Allium tricoccum*; Wildlife Sanct. Travis Ave.,
LE 5/1/54 RF
Loosestrife, swamp, *Decodon verticillatus*; Huguenot and
Arthur Kill Rd., LE Nov. 1952
Hudsonia, woolly, *Hudsonia tomentosa*; Marine Pk., MW 5/29/54 RF
Wintergreen, *Gaultheria procumbens*; Bogert Ave., LE 11/11/53 RF

CRYPTOGAMOUS PLANTS

FA—Fern Allies; F—Fern; L—Lichen; M—Moss; H—Hepatic

FA *Azolla caroliniana*; Basket Willow Swamp, MW 12/12/53 RF
F *Botrychium dissectum*; Bucks Hollow, LE 10/24/53 RF
F *Botrychium obliquum*; Bucks Hollow, ER 9/8/51
L *Cladonia cristatella*; Bucks Hollow, FT 1/23/54
FA *Isoetes Engelmanni*; Wolfes Pond Pk., MW 8/23/52
M *Leucobryum glaucum*; Bucks Hollow, LE 4/12/54 RF
FA *Lycopodium alopecuroides*; Bucks Hollow, LE 12/4/53,
4/12/54 RF
H *Plectocolea crenulata*; Claypit Ponds, LE 8/15/51

AMPHIBIA

Frog, cricket, *Acris gryllus crepitans*; Arbutus Ave.,
RM 5/10/54, 6/15/54

ENTOMOLOGY

Sawfly, violet, *Protemphytus pallipes*; Westerleigh, CC July 1951

BIRDS

Crossbill, white-winged; Great Kills, RM 2/28/53
Curlew, Hudsonian; Oakwood, CR 5/6/51 FT
Duck, shoveler; Marine Pk., MW 5/10/51
Duck, wood; nesting, Latourette Pk., RM 4/15/51
Egret, American; Travis, LE 7/22/53
Flycatcher, alder; nesting, Travis Ave., MW 8/22/53
Gnatcatcher, blue-gray; Clove Lake Pk., CR 5/22/54 FT
Grebe, Holboell's; Oakwood, CR 1/10/53 FT
Loon, red-throated; Great Kills, FT 2/9/52
Martin, purple; Princes Bay, HC 6/23/51, 4/-/52, 9/26/53
Mockingbird; Wolfes Pond Pk., MW 5/10/51
Sandpiper, stilt; Marine Park, CR 5/6/51
Shrike, migrant; Kissel Ave., MW 5/10/51; Mt. Loretto, MW 5/15/54
Swan, whistling; Wolfes Pond Pk., FT 11/10/51
Titmouse, tufted; Westerleigh, CC 1/23/54
Warbler, Connecticut; Clove Lakes Pk, CR 5/22/54 FT
Warbler, prothonotary; Moravian, MW 5/10/52

The following annual nesting bird census on Staten Island was compiled during the months of April, May, and June, 1954 from the records of Casimir Redjives, Chairman of the Bird Committee of the Section of Natural History; Miss Mathilde Weingartner; and Lee A. Ellison. Specimens asterisked were found nesting; others listed are believed to have nested, having been present in numbers during their nesting season. Detailed notes on nesting sites and occurrence are filed in the records of the Section of Natural History.

Green Heron	Wood Thrush
Black Duck *	Bluebird
Mallard Duck	Starling *
Sparrow Hawk *	White-eyed Vireo
Pheasant *	Red-eyed Vireo
Killdeer *	Yellow Warbler *
Woodcock	Chestnut-sided Warbler
Spotted Sandpiper *	Ovenbird
Mourning Dove *	Maryland Yellow-throat *
Barn Owl *	Yellow-breasted Chat
Screech Owl *	Redstart
Yellow-billed Cuckoo	English Sparrow *
Black-billed Cuckoo	Meadowlark
Chimney Swift	Red-winged Blackbird *
Downy Woodpecker *	Baltimore Oriole *
Kingbird *	Purple Grackle
Alder Flycatcher *	Cowbird
Wood Pewee	Scarlet Tanager
Prairie Horned Lark * (12 pr.)	Cardinal *
Barn Swallow *	Indigo Bunting
Purple Martin*	Goldfinch *
Blue Jay *	Towhee
Crow *	Sharp-tailed Sparrow *
White-breasted Nuthatch *	Seaside Sparrow *
House Wren *	Chipping Sparrow
Long-billed Marsh Wren	Field Sparrow
Catbird *	Swamp Sparrow
Brown Thrasher *	Song Sparrow
Robin *	

ART NOTES

GERALD BERNSTEIN

During 1954 the Art Department acquired five distinguished paintings which were the gifts of generous friends of the Museum. We are especially happy to have these paintings because three are by artists who lived on Staten Island and the other two have Staten Island subject matter.

Two of the portraits, gifts of Katherine Wyman Vaughan of Wayzata, Minnesota, were painted by Adelaide Albright Wigand. One, a full-length portrait of Mrs. Vaughan, was painted in Cedar Rapids, Iowa, in 1916 just before Mrs. Wigand came to Staten Island (fig. 1). The other, a charming portrait of a four year old boy, Henry Julian Mullin, was painted in Paris in 1885 (fig. 2) at the time she was studying art at the Julian Academy. It was during this period that she met Otto Wigand, a fellow student, whom she later married.

Both husband and wife were extremely active in promoting art on Staten Island during the thirty years they lived here. Mrs. Wigand was President of the Museum's Art Committee from 1925 to 1931, as well as President of the National Association of Women Artists. Mr. Wigand was the first president of the Staten Island Art Association when it was formed in 1935. Our two new portraits, together with the four other Wigand paintings we already possess, form a fine collection of the work of Adelaide and Otto Wigand to which we hope to add in future years.

Two remarkably clear and colorful views of the Narrows, painted in 1873 by Hermann N. Fücksel, were purchased for the Museum by Henry Schnakenberg. Fücksel was born in 1833 in Braunschweig, Germany, and came to New York in 1858, where he worked for *Palette*, a magazine devoted to art. Our two paintings are extremely fine examples of the landscapes he did in this area. In one painting we see St. John's Episcopal Church overlooking the lower bay (fig. 3). with what may be Fingerboard Road in the foreground. The other painting shows St. Mary's Church on the right with the New York skyline picked out by the sun in the far background (fig. 4). On the extreme left is a building which probably is the Mariners' Family Asylum. Fücksel probably painted both from a position on a hill in Rosebank such

as the one on which St. Joseph's Hill Academy stands. He evidently painted the pictures in autumn, for both are rich in color and shine with a warm and glowing light.

Another noteworthy addition to our collection was given by Mrs. Chester A. McLain. It is a portrait of Mrs. McLain (fig. 5) by Fred C. Stahr, who is known to most Staten Islanders for his murals in Borough Hall. The Museum also owns four other paintings by Mr. Stahr; two large views of the Parthenon and the Erechtheum, and two small still lifes. These four, together with the new portrait, give a most comprehensive view of his work.

All these paintings, together with others from our permanent collection will be shown in the Museum from January 30 to March 2, 1955.

OTHER RECENT ACCESSIONS

During the past two years the Art Department has received a number of unusually fine things in addition to the paintings described above. It is impossible to list them all, but those of most significance perhaps are the following:

Small marble head of the Emperor Caracalla attributed to the Roman period. Gift of C. Ruxton Love, Jr. of Manhattan.

Small Chinese pottery figure of a bull from the Tang Dynasty (618 A.D. to 922 A.D.). Gift of Mrs. Ellinor B. Steinmeyer of Staten Island.

Suit of German armor from about 1570. Some restoration but largely original, much of it probably from the workshop of Anton Pfeffenhauser of Augsburg. Gift of C. Otto von Kienbusch of Manhattan.

Nine framed and a portfolio of forty unframed Japanese prints. Gift of Mrs. H. S. Chapman of Brooklyn, N. Y.

Sixteen framed watercolors of wildflowers by Alice Fraser Campbell. On permanent loan from the Whitney Museum of American Art.

Bronze figure of a spanish peasant (1915) by Gertrude Vanderbilt Whitney. Gift of Mrs. Flora Whitney Miller, daughter of the sculptress and President of the Whitney Museum of American Art.



1



3



4

1. Katherine Wyman Vaughan.
By Adelaide Albright Wigand.
2. Henry Julian Mullin.
By Adelaide Albright Wigand.
3. — 4. Views of the Narrows.
By Hermann N. Fuchsel.
5. Mrs. Chester A. McLain.
By Fred C. Stahr.



2



5

BOOK REVIEWS

The Herring Gull's World: A Study of the Social Behaviour of Birds. By Niko Tinbergen. (Frederick A. Praeger, Inc., 1954. \$4.00).

The herring gull is probably the bird most frequently observed by New Yorkers particularly in the months from October to April. The beauty of their flight as they follow the ferries and other ships in the harbor is fascinating to many people, whether they are customarily interested in birds or not; and, as scavengers, the gulls are invaluable to all of us.

The author, recognized as one of the world's foremost authorities on gulls, has done most of his work in Europe. He held the Chair of Experimental Zoology at Leiden University in Holland before going to Oxford in 1949.

This monograph is a thorough study of the life history and habits of the herring gull, with particular emphasis on the various aspects of breeding and family life. Dr. Tinbergen has enhanced the value of the work by incorporating the results of observations by scientists in other parts of the world, including the United States. He presents some most interesting observations about the gulls' powers of identification. Through banding, and watching the same nesting sites year after year, he concluded that most birds seem to return to the same nesting site, and that they appear to pair for life.

The author's conclusion that herring gulls fail to learn, since they continually drop shellfish on soft sand in an effort to break them open, is at variance with the experience of observers in the United States. Herring gulls here often seem to learn to find a hard surface for this purpose.

Europe is troubled by the same problems concerning herring gulls as the United States, such as overpopulation and the depredations caused in the colonies of the beautiful terns. The various types of gull control are discussed at length. While the index is inadequate, this is a scholarly and well-written work. The photographs are excellent.

R. BRUCE GORDON

American Seashells. By R. Tucker Abbott. (D. Van Nostrand, 1954. \$12.50).

Tucker Abbott proves here how well he is qualified to write a book on this subject. In addition to covering its material well, the book is artistically designed, practically arranged, and so beautifully illustrated that identification of species is greatly facilitated. The spacing and large type faces used, the listing of both common and scientific names of species, the mention of localities where found, and the inclusion of all give additional aid to the amateur shell collector as well as to the professional conchologist.

To top all this, the author has produced a book interesting even to the beginner, with his lively descriptions of the life histories and the economic importance of shells. He goes back in history to very early times, when a shell from the Indian or Pacific Ocean was found in the grave of a Cro-Magnon man in France, proving that even then shells were articles of trade. He continues to the present day, with shellfish still being used for food, the pearl industry thriving in Japan, and the pearl button industry holding its own against the use of plastic.

American Seashells is a reference book and as such should be useful in the identification of any American seashell. To test this I checked my own shell collection against it and can say no more than "It works." For the scientist who likes to use a key Mr. Abbott provided one for many of the genera, which is an innovation in a shell book for popular consumption.

If I were a rank beginner in the study of shells, I might hesitate before paying so much for a book to help with the identification, but after having become interested in the subject, and having seen the book, I would be inclined to scrape my pennies together in order to buy it.

MATHILDE P. WEINGARTNER

The Triumph of the Tree. By John Stewart Collis. (William Sloane Associates, 1954. \$3.50).

This volume is a welcome and timely addition to the popular literature about the decline in the world's tree population. Though written by an Englishman, its appeal is worldwide. It is a history, a drama, and a challenge.

The author stresses in simple, forceful language the importance of trees to the welfare of life in general, and of man in particular. He skillfully blends mythology, economics, and science, and displays rare talent in evaluating weighty works of science and in gleaning from them ideas of practical importance to all of us. The six-page bibliography could be the basis for a good education in ecology and conservation.

One would hardly expect in a book about trees to gain an insight into the mentality of primitive man. Yet this is exactly what the first half of this book accomplishes. It makes the gods, spirits, cyclops, satyrs, etc., of Homer really live. The primitive fear and reverence of trees become quite understandable, and early superstition excusable.

With the general acceptance of the idea of a single universal deity, and a concurrent advance in scientific knowledge, trees lost the protection created by both fear and reverence. They became first an obstruction to the expansion of agriculture, and then a cash crop.

The disastrous effects of excessive deforestation are depicted in the famines, floods, expanding deserts and declining civilizations. Right now, a period of local water shortage, is a good time to take this lesson to heart.

"Nature," says Mr. Collis, "has the last word."

EDWIN RUNDLETT

Living Adventures in Science. By Henry Thomas and Dana Lee Thomas. (Hanover House, 1954. \$2.95).

A captivating book presenting a colorful parade of vivid personalities in the field of science. Never dull nor absurdly jazzed up. This team of authors shows up old facets with new clarity, and new ones are astonishingly revealed. They bring close to us great human beings who made their dreams come true, often at appalling odds. We are made to share their sufferings, disappointments, and triumphs.

To mention a few:—

Galileo, blind during years in prison for trying to save his world, blinded by Aristotelian cosmology.

Audubon, jailed for debt because he preferred watching and sketching birds to watching and stretching his money.

Wright Brothers, years later, also watching birds till they themselves eventually flew before royalty. Medals and ribbons bestowed on them tucked in their pockets, along with screws.

Pasteur, so absorbed in his work for humanity he forgot to attend his own wedding until fetched.

Diesel, thought to have committed suicide, whose magic engine has lowered fuel cost till an \$8.00 motor trip from New York to Los Angeles is a probability.

Roentgen, of limited vision himself, who made possible with X-rays the seeing of the formerly unseeable.

Pierre and Marie Curie, ill and hard-working, who preferred a fine laboratory to their Nobel Prize.

Baird, sickly little Scotsman, who bought human eyes to develop an "electric eye" sensitive enough for television.

These are only a few of the many figures who make this book worthy of wide reading. It helps the layman to understand and appreciate the intricacies of science. Moreover it is encouraging evidence that the battle is not always to the strong-in-body; but truly never to the weak in spirit.

TESSIDA SWINGES

Wildflowers And How To Grow Them. By Edwin F. Steffek. (Crown Publishers, 1954, \$3.95).

The author of this volume (who studied floriculture at the University of Massachusetts, gained considerable practical experience in his own garden, and has written a number of books and articles dealing with horticulture) apparently has directed his efforts towards the green thumb gardener and nature lover rather than the advanced student of botany. After an introduction to plant ecology, he associates the physical factors of environment and provides helpful techniques for plant propagation and cultivation.

Part One includes tables listing plants typical of certain habitats, plants which may be picked freely, and plants arranged according to their ability to thrive in acid or alkaline soil.

Part Two, which comprises the major portion of the book, describes more than three hundred species of wild flowers and plants, where they grow, when they bloom, and how to cultivate

them. This section is arranged alphabetically rather than taxonomically and is accompanied by about fifty rather ineffectual black and white photographs. However, included also are fifty beautifully colored illustrations of some of our most attractive wildflowers, including orchids, gentians, a variety of lilies, and others.

On the whole, this volume will greatly benefit the amateur gardener who is interested in establishing and maintaining a wildflower garden; and it definitely deserves a place on the bookshelves of schools, camps, clubs, and other organizations interested in promoting the love of wildflowers and their cultivation.

KARL O. NESSLINGER

New Green World: John Bartram and the Early Naturalists. By Josephine Herbst. (Hastings House, 1954. \$4.00).

For most of us American history really began in 1775. The Colonial period seems far off and rather uneventful. But for Josephine Herbst it was a Golden Age with an unspoiled wilderness and a small band of naturalists eager to explore it. The decline and fall of both the wilderness and the naturalists is the underlying theme of this book. John Bartram, the eminent 18th century botanist, is its central character.

Bartram was a self-taught man with an insatiable curiosity. Whenever he could get away from his farm and large family, he set out in search of new plants for his wildflower garden near Philadelphia and for his patrons in England. He was a successful and a practical man, but he was moved more by the wonder of what he found than by its possible utility. What would our landscape look like now if more of his contemporaries had shared this attitude?

Another characteristic of these early naturalists was their catholic interests. They studied all of nature. True, they did little more than collect, describe, and classify, but this was not for lack of imagination. They were simply breaking new ground. One of their successors, Charles Darwin, asked some big questions and suggested some big answers. However, after Darwin, laboratory specialists took over the center of the scientific stage, and field naturalists were shunted off to the wings. Perhaps the new science of ecology will at least partially reunite traditional natural history with the newer disciplines of biology.

In the last few chapters of this book, Miss Herbst describes the rather strained relationship between John Bartram and his son William, who inherited his father's passion for natural history but was not as successful a go-getter. William has subsequently become more famous than his father as the result of his *Travels* (which served as a source book for Wordsworth, Coleridge, Chateaubriand and others) and for his drawings of plants and animals. He was one of our early artist-naturalists. Miss Herbst is herself a novelist, which explains, perhaps, why her style, as well as her subject matter, should appeal both to scientists and the literary-minded.

GORDON LOERY

Insect Fact and Folklore. By Lucy W. Clausen. (Macmillan, 1954. \$3.50).

This little book makes a brave effort to present information on a vast subject — the interrelationships between insects and man from prehistoric times to the era of DDT. Miss Clausen is well qualified for this task, having been a staff member of the American Museum's Department of Entomology and at present associated with the Department of Public Instruction. Scientific popularization has been one of her chief interests.

In this present effort at "bringing science to the layman," the author staggers under her load but manages to avoid a fall by her systematic presentation. Following an introductory chapter on general characteristics of the class *Insecta*, she considers in turn the various orders, including the moths and butterflies, beetles, flies, and others. Interesting general information relating to each order is first presented. The second half of each chapter is taken up with a melange of folklore and ethnological data pertaining to that particular order. Much of the folklore is of only passing interest to the average reader and is probably fast disappearing in our era of mass entertainment and more ready communication. The ethnological information and the discussions of *insecta*, which have become the basis of various industries by virtue of their natural products, will have a greater general appeal.

In summarizing it seems to me that Miss Clausen attempts to include too much material within the confines of 194 pages. It is of value, however, for its rather unique approach to entomolo-

gy. An excellent bibliography gives the sources of material scattered through a wide variety of publications.

WILLIAM H. LOERY

The Natural History of Mammals. By François Bourlière. Translated from the French by H. M. Parshley. (Alfred A. Knopf, 1954. \$5.00).

This valuable book, written in non-technical style, is an introduction to comparative habits of mammals and the relationship of species as a result of their environment. The text points out the differences in the normal physiology and mental behavior between the various groups of mammals in nature. Prolonged observation, patience, and ingenuity were required to obtain these results.

The first chapter (on locomotion) explains the anatomical structure of the kangaroo's tail, which enables it to make extreme leaps, and the unusual anti-skid tail scales of the flying squirrel, which the animal uses when landing on tree trunks to break the momentum of its flight. It also explains experiments which demonstrate the ability of bats to avoid obstacles in flight through echo soundings by sending out supersonic vibrations — a forerunner of our present day radar development.

The volume contains ten chapters in all. The chapter on feeding habits tabulates preferred and specialized food tastes together with various requirements of feeding. The author displays a thorough understanding of animal instincts in the chapters on "Home and Territory," and "Defense and Protection." Two chapters are used to cover reproduction, longevity, and social life, with two more for migration and environment. A taxonomic list and bibliographies conclude the book. These are excellent for specialized studies or for one interested in general information on individual mammals.

Illustrations are only fair, but they serve the purpose reasonably well. On the whole any naturalist reading the book will find his viewpoint considerably broadened, and fortunately it is equally enjoyable for young and old. Here is a book quite different than most natural history books — readable and yet including exact scientific information.

JOHN A. WARD

Paws, Hoofs, and Flippers. By Olive L. Earle.* (Wm. Morrow & Co., 1954. \$3.50).

Bats. By Charles L. Ripper. (Wm. Morrow & Co., 1954. \$2.00).

Bufo. The Story of a Toad. By Robert M. McClung. (Wm. Morrow & Co., 1954. \$2.00).

Paws, Hoofs, and Flippers is a most interesting and informative book for young people about mammals. It tells how they are adapted to their environment and about their families; how the scientist classifies them, and why they are considered to be related. (In this reviewer's opinion, however, an elephant might understandably look down his nose at a manatee, if it were introduced as his distant cousin.) The book is made even more enjoyable by the author's sprightly black and white pencil illustrations, which are usually placed on the same page as the text reference. Although the animals are sometimes a little humanized, this is compensated for by generally excellent details.

The book is organized taxonomically. The relationships and classification of animals according to structural modifications are explained, and determine the order in which the mammals are discussed. However, the author has boldly struck out for herself and devised a system of taxonomy based on the structure and modifications of the feet of the mammals. This simplified arrangement makes it possible for her to consider together a number of animals found in similar environments, although by the usual methods of classification they are far apart.

The book's vocabulary and its clear, straightforward narration make it ideally suited for the older child who reads well. It is also full of "good looking" for the young child while a grown-up reads. Children are hungry for the truth about all living creatures, and here are true accounts of real animals, strange and marvelous, which build real understanding of other living creatures and help eliminate unnecessary fears from children's minds.

And the adult, too, himself may find learning something new and interesting about many kinds of animals. He might even, if he is very learned, catch an inkling of how to trim over-

*Our readers will remember that Miss Earle, who lives on Staten Island, is a well-known author and illustrator of children's books and recently wrote *Plants and Animals of Staten Island* published by the Institute in October, 1953.

burdensome detail from a scientific tome and write a book to be read for information and enjoyment — like this one.

Bats, by Charles L. Ripper, is a good, accurate account, telling in clear non-technical language a great deal about the various kinds of bats, their size and structure, haunts and habits. The illustrations are excellent. Ranging from sharp, accurate anatomical drawings to soft-toned pencil renderings of habitats, they are a perfect complement to the lucid text. This is a good book to have or to give to anyone young or old who is interested in nature.

Bufo, The Story of a Toad, written and illustrated by Robert M. McClung, is just the book to give the small child in your life. The pages are brightened by the lively illustrations. Toad eggs, developing step by step in a strand of jelly, wriggle around the margins of two pages until the tadpoles hatch just before the page is turned. Transforming, the tiny toad goes hopping off across the pages in two-color wash drawings which highlight his escapes from the dangers besetting a toad's life. Here is a book which shows that accuracy need not be sacrificed nor animals humanized when making a book for children to treasure.

CARLETON BEIL

How To Make A Home Nature Museum. By Vinson Brown. (Little, Brown & Co., 1954. \$2.50).

This book, coupled with the volume *The Amateur Naturalist Handbook*, also written by Vinson Brown, provides a good reference source for the budding naturalist. There is very little in the book, however, that is entirely new; but the arrangement and presentation of the subject matter are very well handled. Of particular interest is Chapter 9, "Arranging Your Museum Displays." Here the author does an excellent job in an area which has too often been overlooked. I feel it has particular value in helping to sustain the interest of the young "curator." The methods and procedures suggested by this chapter invite and develop thinking about the esthetic side of museum work. Also of great value is the bibliography, which includes most of the good reference books in the field mentioned.

ROBERT F. MATHEWSON

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**STATEN ISLAND
INSTITUTE OF ARTS
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**Volume XVII
Spring 1955
Number 1**

PROCEEDINGS OF THE STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES

Josephine S. Antonini, Editor

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CATALOGUE OF
LAND AND FRESH WATER MOLLUSKS
COLLECTED BY WILLIAM T. DAVIS

MORRIS K. JACOBSON

The universality of William T. Davis' interests is a well-known and well-documented fact. In her definitive biography, Mabel Abbott¹ provides abundant and fascinating evidence. We learn that frequently, from a single excursion on Staten Island, Mr. Davis would return with such varied plunder as bird records, plant and flower specimens, observations on trees, transcripts of old grave stones, Indian artifacts, several dozen insect specimens, records of snakes, frogs and small mammals, historical notes, and mineral samples. It might not be so well-known, however (although it should surprise no one who knew Davis at all), that he also collected mollusks, land and fresh water specimens as well as those from the sea.

Although he was not a specialist in conchology and malacology, there is evidence to show that shells interested him considerably. Dr. Joseph Bequaert, a long-time friend of the naturalist, told the writer personally that on their collecting trips together, Davis had no difficulty in naming most of the local snails and clams. Once the two collectors discovered that trees, which had been sugared to attract insects also seemed to attract land mollusks, thereby making their collecting much easier. In addition, Davis conducted some interesting experiments and made some valuable studies dealing with mollusks.² Hence, it is not remarkable that his interest in collecting mollusks remained persistent, the records dating from 1891 to 1933 and reaching from Key West, Florida, to Long Island, New York. All this makes this catalogue of more than usual interest to specialists and students. It is chiefly with this purpose in mind that the present list is being published. It might be said, in passing, that this record will be of particular interest for the molluscan list of Staten Island because of the many localized records it contains, in contrast to the usual lists which bear nothing more than the locality, "Staten Island."

¹ Mabel Abbott, *The Life of William T. Davis*. Cornell University Press. 1949

² See *Proc. Nat. Sci. Asso. Staten I.*, April 11, 1885 ff.

It is amusing to note that Mr. Davis' early training in entomology carried over to his collection of mollusks in more ways than one. The collection contains several specimens of minute mollusks that are mounted on cardboard points and insect pins and preserved in wooden boxes. Mollusk shells, being more rugged than insects with their finely articulated limbs and fragile wings, permit more vigorous handling and more satisfactory opportunities for observation when they are merely preserved in shell vials, as indeed the larger part of the Davis collection is.

The collection at present is preserved with the other shells of the Staten Island Institute of Arts and Sciences in a satisfactory and easily available form. However, it is unfortunate that the specimens are nowhere catalogued and numbered. The purpose of this paper is to present a detailed catalogue so as to make available numerous valuable records to interested students. This list adds several important records to our already published lists, records that do not appear in so important a work as Dr. Pilsbry's monumental *Land Mollusca of North America*³. Examples, to name two important cases, are *Cepea nemoralis* L., Salem Field Cemetery, Brooklyn, Oct. 1898, an important early record dealing with an immigrant from Europe; and *Oxychilus draparnaldi* Beck, Ft. Wadsworth, Staten Island, April 7, 1911, a very early record of a species that has recently been found in many areas in East Coast cities.

Another valuable aspect of this collection consists in the omission of forms that have recently appeared in Staten Island, for this helps us to set more exactly the date of their first appearance. Such a shell, for example, as *Ventridens ligera stonei* Pilsbry in New Springville must have appeared some time subsequent to April 23, 1933, since the Davis collection contains shells from that locality taken on that date, but there is not a single specimen of the *Ventridens* among them.⁴ A record of the latest visit of Mr. Davis to Clove Lake would similarly help us to set the date for the first appearance of *Vivipara japonica* Marts. in that body of water.

Of great interest and value are the ecological notes that accompany so many of the lots. I shall here list a few of the more prominent ones: *Helicodiscus parallelus* Say, Annadale, Staten

³ Henry A. Pilsbry, *Land Mollusca of North America*, 2 volumes, Philadelphia. 1939-1948

⁴ See *Nautilus*, vol. 66, pp. 99-102

Island, "found among leaves etc. in damp place"; *Fossaria humilis* Say, Bull's Head Pond, S. I., "numerous in dried swamp on leaves of Lizard's Tail etc"; *Mesodon thyroidus* Say, New Springville, S. I., "foundation of old house"; *Ibid.*, near Wilmington, North Carolina, "old rice fields"; *Triodopsis albolabris traversensis* Leach, Sandy Hook, New Jersey, "plentiful along railroad track"; *Polygyra septemvolva* Say, Cocanut Grove, Florida, "found among limestone"; *Succinea ovalis* Say, near New Springville, "among water butter cup"; *Ibid.*, "numerous on plants after rain"; *Oxyloma decampi peoriensis* Walker, Gardiner's Island, Long Island, "on rushes in swamp"; *Succinea avara* Say, Staten Island, "under wood on salt meadow"; *Succinea aurea* Lea, Cold Spring, Cape May, New Jersey, "in wet place (fresh water) by side of road"; and *Planorbula jenksii* H. C. Carpenter, Stony Point, N. Y., "swept from plants on shore of Hudson River."

Frequently the labels bear other interesting information, such as one on a specimen from Rabun Co., Georgia, marked "snail eating other snail." In this case a *Ventridens* was eating the dead shell of a *Mesomphix*, probably for the lime content, since *Ventridens* is generally conceded to be a herbivore. Similar labels for other specimens are: *Cerion incanum* Binney, Big Pine Key, Florida, "a land mollusk the empty shell of which is sometimes occupied by a hermit crab"; *Helix aspersa* Muller, south shore of Staten Island, "probably ballast from England"; and *Lampsilis ventricosa* Barnes, shore at Princes Bay, S. I., "introduced from elsewhere."

Although Davis had a lively interest in shells and, as stated above, possessed a more than average competence, at least in local mollusks, the specimens he collected, which are the subject of this article, were apparently determined by someone else, and some outdated and incorrect names were used. In the present list the names have, wherever necessary, been brought up to date and a few identifications rectified. Hence, the writer must assume sole responsibility for the names and apologizes in advance for the errors he has undoubtedly committed.

In closing this prefatory note, I wish to express my thanks to Miss Mathilde Weingartner, Vice-President of the Section of Natural History of the Staten Island Institute of Arts and Sciences, and Robert Mathewson, Curator of Science, who have permitted me to examine this scientifically valuable collection and have urged me to prepare this catalogue.



William T. Davis on a field trip. The picture appears in the book
Life of William T. Davis, by Mabel Abbott.

LAND MOLLUSKS

Family HELICIDAE

- Cepea nemoralis* Linne; Salem Field Cemetery, Brooklyn, N. Y. Sept. 17, 1913
Helix aspersa Muller; South shore of Staten Island (adventitious).

Family POLYGYRIDAE

- Polygyra cereolus* Muhl.; Key West, Florida. Sept. 17, 1913
P. septemvolva Say; Ft. Meyers, Florida. April 4, 1912
P. uvulifera Shut.; Ft. Meyers, Florida. April 2, 1912
Stenotrema magnifumosum Pils.; Clayton, Georgia, 2000-3700 ft. June, 1909
S. hirsutum Say; Newfoundland, N. J. May 19, 1906
——— Ramapo Mts.
S. leai Binney (= monodon); L. Hopatcong, N. J. July 5, 1913
Mesodon thyroidus Say; Staten Island, N. Y. 1938
——— New Springville, S. I. April 23, 1933
——— Arthur Kill Rd., S. I. June 25, 1938

Mesodon thyroidus Say; near Wilmington, N. C. April 4, 1914
 ——— Newfoundland, N. J. April 25, 1906 ?
 ——— along Potomac R., near Wash. D. C. Sept., 1911
 ——— northern end of Manhattan Is., N. Y. Oct. 14, 1905

M. clarki Lea; Clayton, Ga. June, 1909

M. appressus Say; Clayton, Ga. June, 1909

M. rugeli Shut.; Clayton, Ga. June, 1909
 ——— Rabun Co., Ga. July, 1910

Triodopsis albolabris Say; Newfoundland, N. J. April 25, 1906 ?
 ——— near Hackettstown, N. J. May, 1910

T. albolabris traversensis Leach; Sandy Hook, N. J. Aug. 22, 1910

T. albolabris major Binn.; Rabun Co., Ga. July, 1910

T. notata Deshayes; near central Pennsylvania. Sept., 1909

Family BULIMULIDAE

Drymaeus multilineatus Say; Big Pine Key, Fla. Sept. 19, 1913

Family UROCOPTIDAE

Microceramus pontifucus Gld.; Cocoanut Grove, Fla. Sept. 14, 1913

Cochlodinella poeyana Orb.; Cocoanut Grove, Fla. Sept. 14, 1913

Family CERIONIDAE

Cerion incanum Binn.; Key West, Fla. Sept. 16, 1913
 ——— Big Pine Key, Fla. Sept. 19, 1913

Family OLEACINIDAE

Euglandina rosea Fer.; Miami, Fla.
 ——— Cocoanut Grove, Fla. Sept. 14, 1913

Family HAPLOTREMATIDAE

Haplotrema concava Say; Montgomery Co., Md. June 25, 1911
 ——— along Potomac R., near Wash. D. C. Sept., 1911

Family ZONITIDAE

Zonitoides arboreus Say; Wood Rd., S. I., N. Y. March 31, 1907

Oxychilus cellarius Mull.; Staten Island, N. Y. April 29, 1911

O. draparnaldi Beck; Ft. Wadsworth, S. I., N. Y. April 27, 1911

Retinella electrina Gld.; near Town Bank, Cape May, N. J. April, 1911

Gastrodonta interna Say; Clayton, Ga. June, 1909
 ——— Rabun Co., Ga. July, 1910

Ventridens gularis Say; Clayton, Ga. June, 1909

V. ligera Say; Clayton, Ga. June, 1909

V. ellioti Redf.; Clayton, Ga. June, 1909

Family ENDODONTIDAE

Anguispira alternata Say; North Mt., central Pennsylvania. Sept., 1909

Discus patulus Orb.; Clayton, Ga. June, 1909
 ——— Rabun Co., Ga. July, 1910

Helicodiscus parallelus Say; near Keyport, N. J. March 22, 1911
 ——— Staten Island, N. Y. April 29, 1911
 ——— Annadale, S. I., N. Y. April 17, 1909

Family VALLONIIDAE

Vallonia pulchella Mull.; Ft. Wadsworth, S. I., N. Y. April 27, 1911

Family CIONELLIDAE

Cionella lubrica Mull.; Ft. Wadsworth, S. I., N. Y. April 27, 1911

Cionella lubrica Mull.; Staten Island, N. Y. April 29, 1911
——— Cabin John Run, Md. Sept. 19, 1911

Family SUCCINEIDAE

Succinea ovalis Say; Clove Valley, S. I., N. Y. Aug. 2, 1908
——— Fire Works Wood, South Ave., S. I., N. Y. Sept. 4, 1937
——— New Springville, S. I., N. Y. July 19, 1891
——— near New Springville, S. I., N. Y. March 12, 1927
S. avara Say; salt meadow, S. I., N. Y. Aug., 1891
S. aurea Lea; Cold Spring, Cape May, N. J. April, 1911
S. luteola floridana Pils.; Key West, Florida. Sept. 16, 1913
Oxyloma decampi peoriensis Walker; Gardiners Is., L. I., N. Y. April, 1911

Family HELICINIDAE

Helicina clappi Pils.; Miami, Fla. Sept. 12, 1913

FRESH WATER MOLLUSKS

GASTROPODS

Family LYMNAEIDAE

Lymnaea palustris Mull.; Pond at Willow Brook, S. I., N. Y. March, 1897
Lymnaea humilis Say; Bull's Head Pond, S. I., N. Y. July 19, 1891
——— Staten Is., N. Y. April 23, 1911
Lymnaea columella Say; Buck's Hollow, S. I., N. Y. April 23, 1911

Family PLANORBIDAE

Helsioma trivolvis Say (juvenile); Canal at L. Hopatcong, N. J. July 5, 1913
——— Grantwood, N. J. July, 1925
——— (juvenile); ditch in Great Swamp, S. I., N. Y.
Dec., 1894
H. anceps Menke; Quarry Pond, Mariners Harbor, S. I., N. Y. Oct. 1, 1904
——— L. Louise at L. Hopatcong, N. J. July 5, 1913
Planorbula jenksii H. C. Carp.; Staten Is., N. Y. April 23, 1911
——— L. Hopatcong, N. J. July 4, 1913
——— Stony Pt., N. Y. June 27, 1910
——— Palisades, N. J.

Gyraulus hirsutus Gld.; Great Pond, Riverhead, L. I., N. Y. Aug. 5, 1913
G. parvus Say; Staten Is., N. Y. April 23, 1911

Family PHYSIDAE

Physa heterostropha Say; Kissena Lake, Flushing, L. I., N. Y. Aug. 21, 1909

Family ANCYLIDAE

Ferrissia rivularis Say; Coloburgh Pond, Westchester Co., N. Y. June, 1895
——— L. Louise at L. Hopatcong, N. J. July 5, 1913

Family VIVIPARIDAE

Campeloma decisum Say; Deep Pond, near Wading River, L. I., N. Y.
May 30, 1929
——— Great Pond, Riverhead, L. I., N. Y. Aug. 5, 1913
Lioplax subcarinata Say; Morris Canal east of L. Hopatcong, N. J.
July 5, 1913
——— Morris Canal, Little Falls, N. J. Aug., 1913

Family AMNICOLIDAE

Amnicola Porata Say; Fort Lee, N. J. May 1, 1878

Amnicola porata Say; Westfield, N. J. July 9, 1904
— — — fresh water pond at Wading River, L. I., N. Y.
May 3, 1913

Gillia altilis Lea; Canal, Paterson, N. J. July, 1902
— — — Canal at L. Hopatcong, N. J. July 5, 1913

Family PLEUROCERIDAE

Goniobasis virginica Gmel.; Canal at Paterson, N. J. July, 1902

PELECYPODS

Family MARGARITANIDAE

Margaritana margaritifera L.; Pascack Brook near Hillsdale, N. J.
f Aug. 25, 1909

Family UNIONIDAE

Elliptio complanatus Sol.; Pond on Peconic R., near Calverton, L. I., N. Y.
Sept., 1910

Anodonta cataracta Say; Pond on Peconic R., near Calverton, L. I., N. Y.
Sept., 1910

— — — Kissena Lake, Flushing, L. I., N. Y.
Aug. 23, 1909

A. implicata Say; Prospect Park, Brooklyn, N. Y. Aug., 1909
— — — near Newark, N. J. Aug., 1909

Lampsilis vertricosa (adventitious); Barnes shore at Princes Bay, S. I., N. Y.
Mar. 28, 1920

Family SPHAERIDAE

Sphaerium sp.; Everglades, Fla., salt meadow June 9, 1912
S. striatinum Con.; Pascack Brook near Hillsdale, N. J. Aug. 25, 1909

S. simile Say; Pond at Broad St., Westfield, N. J. July 9, 1904
— — — Kissena Park Lake, Flushing, L. I., N. Y. Aug. 21, 1909

Musculium partumeium Say; near Richmond, S. I., N. Y. Oct. 17, 1909
— — — Silver L., S. I., N. Y.
— — — Buck's Hollow, S. I., N. Y. April 23, 1911

CUTTING OF STATEN ISLAND FORESTS DURING THE REVOLUTION *

KENNETH SCOTT

Charles W. Leng and William T. Davis in *Staten Island and Its People* in their discussion of the forests of the island refer to "widespread cutting during the Revolution for fuel."¹ From published and unpublished sources it is possible to give a more detailed account of what took place. In May, 1788, Nicholas Stilwell addressed a memorial to the British commissioners appointed to consider and adjust the claims of loyalists in America. Stilwell, a descendant of the Nicholas Stilwell who had settled on Staten Island about 1646, was apparently a member of St. Andrew's Church in Richmondtown in 1787, and in March, 1776, had been nominated to hold office as adjutant in the patriot militia.² In his memorial he stated: "Your memorialist, being numbered among those unfortunate Persons, who, on account of having their Farms in the Vicinity of the British Encampments and Fortresses, have had the chief Part of their Woods cut down and carried away by the British Troops, in the course of the late unhappy War and appropriated to the Service of Government, both as Fuel for the Troops and as Pickets, Fascines and Pallisades for the constructing of Fortifications, did, in the Year 1783, among many others, in a similar Predicament, upon a notification of his Excellency Sir Guy Carlton, the then Commander in chief, deliver in his Claims, duly attested to and supported by the Oaths of the appraisers, to a Board of Commissioners, instituted by his Excellency for the purpose of examining and registering the said Claims, and has not a doubt of their being recorded." Stilwell's losses had been estimated to amount to £500 in the appraisal made "by four judicious and respected Inhabitants" of Staten Island of the damage done his woods by the British troops.³

*THAT STATEN ISLAND forests have been cut over several times during its history is well-known, and the damage done by the British has been touched upon in many different places. It seems to be true, however, that very little detailed information has been dug out to support an evaluation of the extent and character of this damage. Dr. Scott has probably done more research on the question than anyone else, and we are grateful to him for adding to our knowledge of a subject that has interested both historians and naturalists for many years. — ED.

Two elderly inhabitants of the island in 1852 in conversations recounted what had transpired. Isaac Simonson stated: "The hills behind the Quarantine were originally covered with big hard timber, Oak, Hickory &c. This was all cleared during the Revolution . . . Hundreds and Hundreds of acres were cut."⁴ Peter Wendel remarked that "the wood cut by the British during the war was chiefly from the hills behind Quarantine, which were covered with all kinds of timber."⁵ "The island," he said, "was originally as well timbered as any part of America. The hills were covered with heavy chestnut and oak timber. All the wood was stripped off down to Old Town." He added that his father "carted 200 cords from Toad Hill, and got no pay for it."⁶

A Tory judge, Thomas Jones, had much to say on the subject. He recounted how the forests on Staten Island, Long Island and a section of Westchester County "were, in the course of the war, all cut down by order of the barrack-masters, carried to New York, and applied as fuel for the use of the army." "All the wood," he wrote, "has been regularly charged to the Crown, as wood purchased for the use of the army at so much the cord, the whole of which went into the pockets of the barrack-masters; the real proprietors never got a sixpence." "In June, 1780," he continued, "General Robertson, then civil Governor of New York, ordered, by a proclamation, every freeholder within the counties of Richmond upon Staten Island, and those of Kings, Queens, and the westernmost part of Suffolk upon Long Island, to cut a certain number of cords of wood, according to the quantity upon each farm, and by a certain day to cart and deliver it at the several wood yards, or landing places [such wood yards were established at Watson's and Decker's ferries upon Staten Island], in the proclamation mentioned. The price he limited at sixteen shillings, New York currency, for oak, and 28 shillings for hickory . . . A great part of the wood was cut off of rebel farms, and cost nothing, and what was purchased from the Loyalists, no more than 16 shillings a cord for oak and 28 shillings for hickory nut . . . but the barrack-masters sold it to the citizens of New York at the enormous price of £4 a cord for oak, and £5/10/- for hickory nut."⁷

In November, 1779, Sir Henry Clinton, in order to procure fuel for the approaching winter, issued a proclamation requiring all persons who had obtained permission to cut wood off certain

lands on Long Island and Staten Island to bring what they had cut to the market. Farmers with their wagons and carts might be impressed to transport the wood and the colonels of the loyalist militia of the different districts had the power to grant permissions for cutting wood and to order it brought to the landings. The proprietors of woodland were ordered "immediately to cut and cart to the most contiguous landings such proportion of their wood as will fully answer the intent and meaning of this proclamation, and prevent the disagreeable necessity of granting permissions for their woods to be cut by others."⁸

It may be presumed that such a permission was at some time during the Revolution granted to Richard Conner to cut wood belonging to Samuel and John Broome, and his cutting led to litigation against him by the Broome brothers. The records instituted by them in the Supreme Court of New York yield valuable information concerning the species and quantity of wood destroyed and the purpose for which some of it was used.

Richard Conner came from Ireland to Staten Island in 1760 and resided there until his death in 1792; in 1766-1767 he was one of the collectors of taxes and from 1766-1784 a supervisor; he further served as one of the representatives of Staten Island to the First Continental Congress and as a member of the Richmond County Committee of Safety in 1776, while in that year he was one of the persons empowered to represent the county in the Continental Congress.⁹ There can be no doubt that he was a convinced patriot despite the fact that he remained on the island during the enemy occupation and served as a local official.

Samuel and John Broome were the sons of Samuel Broome, Sr., of Staten Island, who in his will, which he made on April 5, 1771, the year of his death, left to Samuel Broome, Jr., the lot of land which was formerly laid out for Francis Lee and to John Broome the lot of land which was formerly laid out for Abraham Lackman.¹⁰ Both pieces of property were situated on the south side of Fresh Kills and were acquired by Samuel Boome, Sr., in 1744. The tract which had belonged to Lee consisted of some sixty-seven acres.¹¹

Samuel Broome, Jr., was the head of the firm of Samuel Broome and Company and had as his two partners his brother John, and his brother-in-law, Jeremiah Platt, for Samuel had married Phoebe Platt, the daughter of Dr. Zophar Platt of Long Island. Samuel was prominent as one of the Sons of Liberty, was

a member of the Committee of 100 in 1775 and was commissioned captain in the First New York Continental Regiment. When the British occupied New York City, he fled and removed to Connecticut, where in January, 1778, he was asked by John Jay to advance £100 to James DeLancey, the loyalist who had been taken prisoner and was then in jail in Hartford.¹² During the Revolution he and his brother were active in fitting out privateers. He returned to New York from Connecticut in November, 1783.¹³

John Broome, born on Staten Island in 1738, was, like his brother, an ardent patriot and served on the committees of 51, 60, and 100 in 1774 and 1775. He was appointed lieutenant colonel of the Second New York City Regiment, was a delegate to the Third and Fourth Provincial Congresses, a member of the New York Assembly in 1801-1802, a New York State senator in 1804 and lieutenant governor of the state from 1804 to the time of his death in 1810. He was one of the founders of the Tontine Coffee House.¹⁴

The New York Legislature on March 17, 1783, passed an act for the relief of persons who had suffered losses during the Revolution under the British occupation;¹⁵ under this act at the April and May, 1784, term of the Supreme Court of Judicature Samuel Broome, by his attorney, Aaron Burr, brought an action for trespass against Richard Conner, who, he complained, on September 1, 1776, and at other times between that date and March 16, 1783, at Richmond took from his, Broome's, property 1,000 cords of nut wood (valued at £2,000) and 1,000 cords each of oak, beech, birch, maple and cedar (each 1,000 cords of each of these woods being valued at £1,000). Further, Broome charged that Conner took and carried away other wood in the same amounts and of the same values and finally that Conner "injured, cut down, and destroyed" 1,000 nut trees, 1,000 oak trees, 1,000 beech trees, 1,000 birch trees, 1000 maple trees and 1,000 cedar trees, the total value of which was £1,000. Broome added that he had left Staten Island on September 1, 1776, to escape from the British and that since his departure he had sustained damage at the hands of Conner to the extent of £1,000. Conner, by his attorney, Brockholst Livingston, pleaded not guilty. The case was tried before Judge John Sloss Hobart, and the jury found Conner guilty and assessed damages at £130 and costs and charges at 6d.¹⁶

John Broome's suit against Conner, brought through his attorney, Aaron Burr, at the April and May, 1784, term of the

Supreme Court, contained the same charges as those found in Samuel Broome's complaint, and Conner was found guilty at the October term of the court that same year, when damages were assessed at £30 and costs and charges at 6^d.¹⁷ This verdict seems to have been set aside and the case dragged on from term to term until there was a final decision in favor of Broome to whom the jury awarded the £30/0/6 and in addition £99/10/3, making a total of £129/10/9.¹⁸

A document introduced in the case of John Broome vs. Conner indicates that some of Broome's wood, at least, was consumed as firewood by the Loyalist Staten Island Militia, which had been organized under the command of Colonel Christopher Billopp and had been given the assignment of guarding the north and west shores of the island against attacks from the patriot forces in New Jersey.¹⁹ This paper, addressed to "the Magistrates of Staten Island" and dated December 15, 1777, was issued by order of Brigadier General Campbell, who must be General John Campbell,²⁰ and was signed by James Campbell, Major of Brigade.²¹ It reads as follows:

"Whereas the Militia of this Island keep Guard nightly at four different Posts, and whereas B. G. Campbell is pleased to direct that an Allowance of Firewood should be made to every Post at the Rate of one eighth Part of a Cord for each Guard or Post for a Night or one Half of a Cord pr. Night for the whole — You are hereby directed & required to cause that Quantity of Firewood & no More to be provided in the manner that shall appear to you most equitable and just, so as to prevent the Trouble of providing it from falling upon particular Persons, but may fall upon the Inhabitants at large by equal Distributions of that Duty.

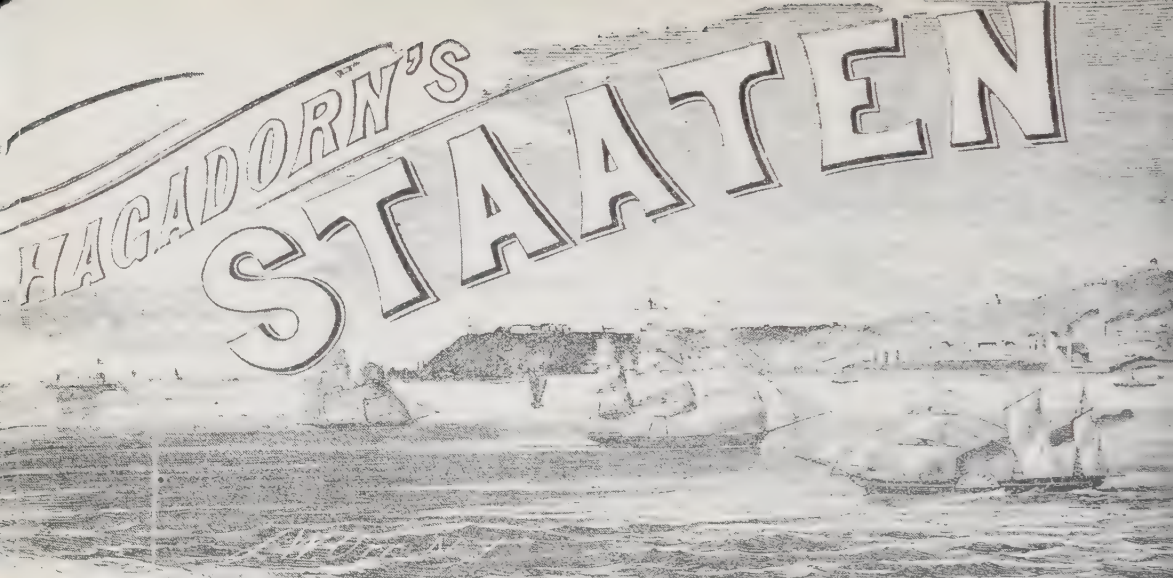
"And Whereas complaint has been made to him in the Name & on Behalf of those Inhabitants at whose Houses or Possessions the several Guards as above are kept, that they suffer greatly in their Property, by feeding the Horses that the Militia carry with them to these Posts, and whereas no Provision can possibly be made by Government for Horses they respectively carry with them for their own Convenience you are therefore required and directed to take the said Grievance complained of into your Consideration, and are hereby empowered to grant such Relief therein, as to your Judgment shall appear equitable & just —

"And the Inhabitants whatever are ordered & commanded implicitly to obey your Orders & Directions respecting these Points as they shall answer to the Contrary at their Peril —"²²

By introducing the above document as evidence Richard Conner was apparently trying to show that his cutting and carrying away of wood belonging to John Broome was the result of orders issued by the British authorities. Doubtless he and other magistrates were compelled to cut down and deliver wood which belonged to patriots such as the Broome brothers who had fled from the island upon the arrival of the king's forces.

NOTES

- ¹ (N.Y.: Lewis Historical Publishing Co., Inc., 1930) I, p. 11.
- ² *Ibid.* V, p. 177 and I, p. 169.
- ³ Perine Papers, Miscellaneous, Accession 1522, in the possession of the Staten Island Historical Society. This document was brought to the attention of the author through the kindness of Mr. Loring McMillen.
- ⁴ "Anthon's Notes," *Proceedings of the Staten Island Institute of Arts and Sciences* V (Oct. 1929-May 1930), p. 138.
- ⁵ *Ibid.* V, p. 160.
- ⁶ *Ibid.* V, p. 158.
- ⁷ Thomas Jones, *History of New York During The Revolutionary War* (N.Y.: The New-York Historical Society, 1879) I, pp. 338-340.
- ⁸ William Dunlop, *History of the New Netherlands* (N.Y.: Carter & Thorp, 1839) II, Appendix, p. ccxxix.
- ⁹ Leng and Davis, *op. cit.* I, pp. 158, 160, 165-166, 169-170 and II, p. 878.
- ¹⁰ Copy of the will of Samuel Broome, probated on November 26, 1771, in the Surrogate Court in New York City, Liber 28, p. 134.
- ¹¹ Grantors and Grantees, Liber D, pp. 141 and 146 in the Richmond County Clerk's Office; Leng and Davis, *op. cit.* II, pp. 917 and 920.
- ¹² Lorenzo Sabine, *The American Loyalists* (Boston: Charles C. Little and James Brown, 1847), p. 246.
- ¹³ Frederic Gregory Mather, *The Refugees of 1776 from Long Island to Connecticut* (Albany: J. B. Lyon, 1913), pp. 664-665.
- ¹⁴ *Ibid.*, p. 664. For the date of his death see the will of John Broome, probated August 11, 1810, in the Surrogate Court in New York City, Liber 49, p. 29.
- ¹⁵ *Laws of the State of New York* (Albany: Weed, Parsons & Co., 1886) I, p. 552.
- ¹⁶ Parchment Rolls 164-B6 and 233C2 in the Office of the County Clerk, Hall of Records, New York City.
- ¹⁷ Parchment Rolls 107-G2 and 106-A5 in the Office of the County Clerk, Hall of Records, New York City.
- ¹⁸ Parchment Rolls 45A6, 106A5 and 190H3; Pleadings, 1754-1837, B447, B356 and B498; Minute Book of the Supreme Court of Judicature of New York, Jan. 19-May 8, 1790, pp. 13, 68, 102 and 196 (all of the above manuscripts are in the Office of the County Clerk, Hall of Records, New York City).
- ¹⁹ Leng and Davis, *op. cit.* I, pp. 181 and 187.
- ²⁰ *Universal Register for 1778* (N.Y.: Hugh Gaine, 1778), p. 117.
- ²¹ James Campbell was major of the Thirty-Third Regiment of Foot (see *A List of the General and Field Officers* (London: J. Millan, 1777), p. 87.
- ²² Pleadings, 1754-1837, B980, in the office of the County Clerk, Hall of Records, New York City.



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YESTERDAY'S NEWS

JOSEPHINE S. ANTONINI

The Staten Island Institute of Arts and Sciences has the largest collection of old Staten Island newspapers to be found anywhere. A large percentage of these newspapers is unique in the revelation of the lives, personal activities, politics, and community problems of the 108-year period which they cover. The original newspapers have been preserved as carefully as possible, so that all may enjoy this inheritance and the exciting story of those who lived here before us; but time tells, and many of the papers are now brown and brittle.

The Institute has set in motion, therefore, a program for preserving these newspapers by means of the modern microfilm process. Our friends and members who have been inspired by this interesting project are contributing to its fulfillment. It is impossible to describe in detail the wealth of material to be found in these papers — records of daily events, science, sports, humor, and controversy — but the examples here should give a good idea of their value.

A WORK OF ART

The illustration above shows one of the old-time elaborate mastheads of a weekly newspaper of 1856 which was the first one on Staten Island to be operated by power press. We wonder how many of our readers can identify Staten Island landmarks in this panoramic view. It shows the shore of Staten Island facing New York and Brooklyn. At the extreme left can be seen Fort Lafayette in Brooklyn, and directly across the Narrows is Fort Richmond (Fort



The Literature, and the Local News and Interests of Staten Island

FROM THE REST, OR TO ENFEEBLE THE SACRED TIES WHICH NOW LINK TOGETHER THE VARIOUS PARTS. — Washington.

WEDNESDAY, APRIL 5, 1856.

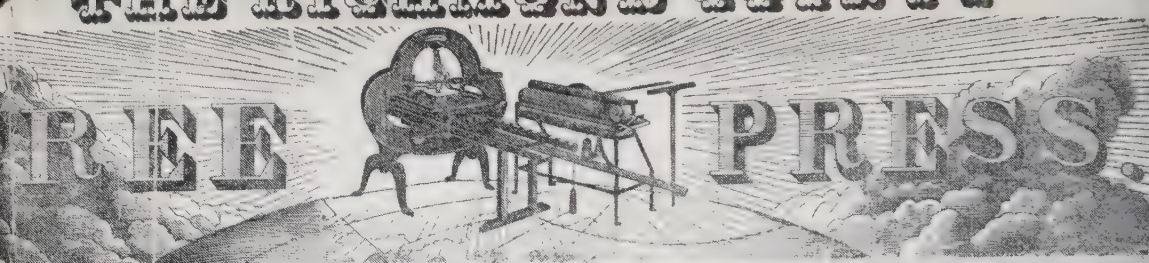
VOL. V. No. 1.

Wadsworth) with its telegraph poles rising from the heights (Signal Hill). Following along the shore line to the right, there is the Seaman's Retreat (Marine Hospital), with a flag pole, at Stapleton, and Grymes Hill behind it. Next are the factory smoke stacks of the developing industrial area of Stapleton, and the ferry landing. Vanderbilt's Landing at Clifton is farther to the left. Ward's Hill (right center) rises above the growing town of Stapleton and follows along to Pavilion Hill towards Tompkinsville. At the shore (right) is the old Quarantine Building, at Tompkinsville, with its long pier and two flags. The old stone structure of Robbins Reef Lighthouse stands out to the far right.

Ships in the foreground show the continuing use of sailing vessels even while steamboats and steam ferries were gradually becoming the more popular mode of transportation. In the center is a warship with guns at its side, wooden sidewheelers (a combination of steam and sailing ships), square-rigged sailing ships, and steam ferryboats heading for the Stapleton and Vanderbilt landings.

OLDEST GOES BACK TO 1833

We are fortunate in having two volumes of a very early paper *The Richmond County Free Press*, published by William Hagadorn in 1833 and 1834. Historical material of considerable value can be gleaned from the fascinating advertisements, legal notices, and editorial notes (the earlier local newspapers were generally inclined to stress literary efforts rather than local and political news.¹) Such an item of particular interest to Staten Islanders is one which states that a Staten Island Ferry ride to New York cost 25 cents



published every Saturday, at 3 dollars per annum, at the printing office, 174 Broadway---Devoted to News, Literature, Politics and Miscellany

WILLIAM HAGADORN.

SATURDAY, MAY 18, 1833.

VOL. 2, NUMBER

BRITISH EMIGRANT

ed without being observed himself; knew that he had not been noticed, and after his departure saw you proceed but hard working her home, recognized her person, comports with the eloquence had been completely some white men bad, and hurt Indian

in 1833. A few others indicate that the new steamboat "Hercules," owned by Capt. Vanderbilt, was ready to do towing at all hours of the night and day and that the Tompkins Academy at Tompkinsville, with John J. Clute as Principal, announced the next term's studies, which included Reading and Orthography at \$3.00 and these with Penmanship at \$3.50, Natural Philosophy, Rhetoric, &c. \$5.00. The Editor posted a notice "Subscribers to this paper are cautioned to make no payment to any carrier (except the son of the editor) without receiving a printed receipt *with the editor's signature.*"

This early paper had to be printed in New York, but soon another industrious printer, Francis L. Hagadorn, son of William, had set up his press on Staten Island to begin the *Richmond County Mirror* in 1837. Volumes I and II are in our collection. In glancing through this paper also, one is struck by the many advertisements which give glimpses of life at the time. One of the more prominent ones announces a reduction in the Staten Island Ferry fare to 12½ cents, with two boats on Sundays during the summer, leaving the island at 7 P. M. for the last trip.

Another advertisement concerns the American Museum, at Broadway and Ann Street, showing a contrast in some respects to museum aims and purposes today. "The extensive halls of the Museum are airy and ventilated and brilliantly illuminated every evening, affording at all times a desirable place for an agreeable lounge." Also, the Peale Museum, at Broadway opposite City Hall, had everything from "works of Nature and art . . . an Egyptian Mummy in fine preservation, electrical apparatus, living Anaconda serpent . . . portraits and other paintings . . . the grand Cosmorama . . . Indian curiosities, wax figures of the Siamese Twins, &c." In addition to Staten Island advertisements of the Port Richmond Hotel and the Cityville and Tompkinsville Post Offices' Lists of Letters, there are the many enterprising New York Cards of Business informing our Staten Islanders about such things as the Baths, a Wig and curl maker (from \$7 to \$10), penmanship lessons, a Dentist who would also do Leeching and Cupping, a ship and house carver, bleached sperm oil, and white and black smiths.

The practical value of this treasury of the lives and thoughts of Staten Islanders of yesterday is shown in the way these newspapers are frequently consulted by researchers, historians, lawyers, fiction writers, members of the press, city officials, genealogists, realtors, and others in search of Staten Island's past.

The generosity of our friends has made it possible to complete the microfilming of our issues of the *Sepoy* (started February 1859 to defend Staten Islanders "from unjust attacks in consequence of the burning of the Quarantine"²); the *Sepoy's* successor, *The Richmond County Gazette*; and *The Richmond County Sentinel*. The period of the merger of the *Gazette* and *Sentinel* (1882—1885) is included in the completed microfilming which covers the years 1859 to 1902. This material has been condensed on 12 reels of microfilm now ready for use. Listed below are all of the Staten Island newspaper files in our collection which we plan to microfilm as soon as funds are available.

<i>Richmond County Free Press</i>	May 11, 1833 — Oct. 4, 1834
<i>Richmond County Mirror</i>	July, 1837 — July, 1839
<i>Staten Islander</i>	Sept. 11, 1847 and Sept. 15, 1852; 1889—1927
<i>Staaten Islander</i>	Jan. 23, 1856 — Dec. 30, 1857
<i>Richmond County Gazette</i> , and <i>Richmond County Sentinel</i> ³	1859—1889, 1901—1902
<i>Staten Island Independent</i>	Oct. 21, 1893 — Oct. 18, 1895
<i>Richmond County Standard</i>	1881—1894, 1900
<i>Staten Island World</i>	1901—1920
<i>News-Letter</i>	Dec. 1896 — Nov. 1897
<i>Staten Island Times-Transcript</i>	1927—1941
<i>Richmond County Argus</i>	March — Dec. 1, 1902
<i>Richmond County Advertiser</i>	May 1915 — Nov. 1915

¹ Leng, Charles W., and William T. Davis, *Staten Island and Its People*, Vol. II, (New York: Lewis Historical Publishing Co., 1930), p. 757.

² *Ibid.*: p. 760.

³ Microfilming completed.

SCIENCE NOTES

ROBERT F. MATHEWSON

$E + I = K + T$ is an equation that one will not find in a mathematics text book, for it actually means "Enthusiasm plus Interest is equal to Knowledge plus Thrill." No better evidence can be provided to support this equation than an account of the 1954 Christmas Bird Census. Eighteen people* went into the field on Sunday, December 20th, and traversed the length and breadth of the Island in quest of bird populations. This display of enthusiasm and interest resulted in the knowledge and thrill of discovering eleven species of birds which were either new or unusual for Staten Island at this time of the year: Baltimore oriole (Cleaves); pied-billed grebe (Weingartner), four blue geese, osprey, brown thrasher (all by Mathewson and McNeish); clapper rail (Redjives); mute swan (Lea), Wilson's snipe, purple sandpiper (Flamm); northern shrike (Whitehead); and the nutcracker (Ellison). In all, 31,084 specimens, representing 76 species, were noted. The list is as follows.

Horned Grebe	60	Red-breasted Merganser ...	15
Pied-billed Grebe	1	Red-tailed Hawk	3
Double-crested Cormorant .	5	Red-shouldered Hawk	4
Black-crowned		Marsh Hawk	2
Night Heron	1	Osprey	1
Mute Swan	1	Sparrow Hawk	6
Canada Goose	1	Ring-necked Pheasant	27
Blue Goose	4	Clapper Rail	3
Mallard Duck	33	Coot	1
Common Black Duck	400	Killdeer	34
Baldpate Duck	3	Wilson's Snipe	1
Green-winged Teal	8	Purple Sandpiper	41
Greater Scaup Duck	4,050	Sanderling	47
American Golden-eye Duck ..	17	Common Black Duck & Gull ..	181
Ruffle-head Duck	84	Herring Gull	18,475
Old-squaw Duck	47	Ring-billed Gull	44
White-winged Scoter	7	Laughing Gull	10
American Scoter	1	Bonaparte's Gull	508
Hooded Merganser	2	Mourning Dove	12

*Howard H. Cleaves, Barbara Cook, Lee A. Ellison, Henry Flamm, R. Bruce Gordon, Vera Gordon, Fred W. Hopping, William H. Lea, John Lemaire, Gordon Loery, James McNeish, Robert F. Mathewson, Casimir Redjives, Hans Schleich, Thomas Schleich, Miriam C. Stryker, Mathilde P. Weingartner, James L. Whitehead.

Barn Owl	1	Eastern Meadowlark	1
Screech Owl	2	Red-winged Blackbird	91
Long-eared Owl	1	Baltimore Oriole	1
Belted Kingfisher	1	Cowbird	51
Hairy Woodpecker	14	Cardinal	44
Downy Woodpecker	80	Pine Siskin	10
Prairie Horned Lark	6	Goldfinch	5
Blue Jay	67	Red-eyed Towhee	2
Crow	355	Savannah Sparrow	2
Black-capped Chickadee	201	Seaside Sparrow	2
Tufted Titmouse	1	Slate-colored Junco	186
White-breasted Nuthatch ..	40	Tree Sparrow	117
Red-breasted Nuthatch	2	Field Sparrow	10
Catbird	1	White-throated Sparrow ...	98
Brown Thrasher	1	Fox Sparrow	1
Robin	3	Swamp Sparrow	12
Northern Shrike	1	Song Sparrow	144
Starling	5,163	Lapland Longspur	1
Myrtle Warbler	5	Snow Bunting	5
English Sparrow	191		

The following beetles, collected by Dr. William Loery, were checked and numbered according to C. W. Leng's *Catalogue of the Coleoptera of America, North of Mexico*, (John D. Sherman, Jr., Mt. Vernon, N. Y., 1920) and are additions to the list of Staten Island Coleoptera published in the *Proceedings of the Staten Island Institute of Arts and Sciences*, Vol. II, part 1, Jan., 1924, and the supplements to that list.*

Carabidae 1868. *Oodes americanus* Dej., Wildlife Refuge at New Springville, Apr. 24/54

Histeridae 6623. *Hister bimaculatus* L., Todt Hill, June 26/54

Dermestidae 9785. *Trogoderma versicolor* Creutz., New Brighton, May 30/54; in dried raisins.

Nitidulidae 10047. *Carpophilus melanopterus* Er., Martlings Pond, June 29/54; in yucca blossom.

Colydiidae 10592. *Bothrideres geminatus* (Say), Todt Hill, June 20/54

Scarabaeidae 13110. *Aphodius erraticus* (L.), Princes Bay, June 20/54

Scarabaeidae 13111. *Aphodius haemorrhoidalis* (L.), Princes Bay, June 20/54

**Proc. S. I. Inst. Arts & Sci.*, Vol. V, pts. 2-4 and Vol. IX, pt. 3; *Bull. B'klyn. Ento. Soc.*, Vol. XXX, No. 4.

BOOK REVIEWS

Animal Control in Field, Farm, and Forest. By W. Robert Eadie. (Macmillan, 1954. \$3.75).

Dr. Robert W. Eadie defines wildlife management as ". . . the control or manipulation of wildlife populations and environment in relation to man's interests." He points out that in certain areas many of our native mammals, including bears, deer, coyotes, foxes, and wolves become such serious pests that they must be controlled to protect our agricultural interests.

A separate section on each of these destructive species discusses in detail the physical appearance, geographical distribution, food habits, reproductive potential, economic importance, cost of aggregate damage, and practical methods of control. Analyses of the scats and stomach contents of large numbers of predatory animals supplied factual data of their food habits during various seasons. The presence of animal matter in a stomach does not necessarily mean that the predator killed the prey, but it may simply have devoured a dead carcass. Even when predations are evident, these may be nullified by important compensating factors. Thus, while an occasional weasel destroys chickens, many others destroy house rats which can cause even greater damage.

Endemic diseases may act as a natural decimating factor among certain species; and wild animals serve as reservoirs for a number of infectious conditions, such as rabies, tularemia and typhus. The various methods of control described by the author include repellents, poison baits, special traps, electric fences, payment of bounties, employment of professional hunters, and the encouragement of natural enemies.

Since sentiment and prejudice so often militate against adequate control measures, the publication of this book aids greatly in emphasizing the need for education of the public to the economic necessity of scientific management of our wild animal population.

PATRICIA O'CONNOR

The Mammal Guide: Mammals of North America North of Mexico. By Ralph S. Palmer. (Doubleday & Company, Inc., 1954. \$4.95).

The Mammal Guide is a welcome addition to Doubleday's Pocket Nature Guide series. Like its predecessor, the *Audubon Bird Guide*, it is compact and highly useful as a field manual, and it contains a remarkable amount of information for a book of its size. Although it is written for the layman, the professional biologist will undoubtedly find it a convenient field reference manual. Dr. Palmer, who has studied birds, mammals, and fine arts, is the state zoologist at the New York State Museum and for the State Science Service in Albany.

A brief but important introduction to this 384 page guide tells the reader how to use the book, how mammals are named, and how to find out more about the subject. The text, as in other books in this series, devotes a few pages to each species, but there is little emphasis on the advanced concepts of subspecies. Included with the brief but adequate description of each mammal is a map showing its distribution. Each account is further divided into clearly marked subsections.

Under "Habitat" we learn pertinent details of the type of cover the mammal prefers. "Reproduction" includes information about nests, breeding season, size and number of litters, growth of young, and other life history data. A more detailed section on "Habits" provides a wealth of facts which should be useful in the field: voice, calls, tracks, droppings, characteristic gnawing marks, and how to recognize the mammal by its movements at great distances. Finally, under "Economic Status," there are up-to-date facts about damage done by pest species, control measures, or the effects of a species on other animals and plants.

Forty color plates showing over 180 species of mammals add to the usefulness and beauty of the book. Although the color rendition is fuzzy in some cases, the essential characteristics are well-shown and the plates are excellent for a book in the low price range.

In conclusion, it should be mentioned that very recently another similarly excellent, but somewhat smaller field guide to mammals was published in the familiar Peterson series. The prospective buyer of a pocket book on mammals would do well to consider the merits of both guides.

CARLITA NESSLINGER

American Game Birds of Field and Forest. By Frank C. Edminster. (Chas. Scribner's Sons, 1954. \$12.50).

This handsome reference book should furnish a common meeting ground for the sportsman, the bird-lover, and the conservationist. The author, in a mostly non-technical and popular style, treats of the habits, ecology, and management of some fifteen game birds in the United States.

Important and useful information for the hunter, the farmer, and the nature enthusiast in the eastern portion of the country is contained in chapters on pheasant, wild turkey, grouse, quail, partridge, and woodcock.

Surprising history concerning the introduction of several of the species to America is noted, particularly as to the pheasant. For example, the Caucasian pheasant was originally introduced to the eastern states about 1790 but proved unsuccessful. The Chinese or Oriental strain was brought to Oregon in 1881 and to California in 1889. Public pheasant hunting was not commenced in the latter state until 1933 because of the slower accommodation of the bird to its new environment. Locally, our neighboring state of Pennsylvania commenced official stocking as late as 1915. South Dakota's huge pheasant population was first stocked in 1912 but gained rapidly because of ideal surroundings. The European and the Oriental pheasants have crossed blood lines successfully in the new world as they met across the continent. Features of each parent stock become more predominant as we approach the respective coasts.

The book is well illustrated as to the shelter requirements of all species reported on, together with their respective food sources. Both diagram and picture are used to show typical ground cover desired by all the birds in their nesting and the effects thereon by natural and man-made conditions. The complete life cycles of the various game birds and the inter-relation with man and nature combine to form a story of equal interest to either the casual or professionally interested person. It is indeed regrettable that the high charge for the volume, however it may be warranted, will mostly restrict its popular distribution.

HARRY G. FLETCHER, JR.

Fifty Centuries of Art. By Francis Henry Taylor. (Published for the Metropolitan Museum of Art by Harper and Brothers, New York, 1954. \$5.00).

Masters of Modern Art. edited by Alfred H. Barr, Jr. (The Museum of Modern Art, distributed by Simon and Shuster, New York, 1954. \$15.00).

The year 1954 was marked by many anniversaries of museums, new museum buildings, and other expansions in the field. It is interesting to note that both the Metropolitan Museum of Art and The Museum of Modern Art published books that year which, in addition to reflecting the individual personalities of their institutions, appear to be inspired by a desire to express their own reason for being.

Fifty Centuries of Art is an unusual publishing achievement and is part of the Metropolitan Museum's expanded program of presenting art to the public. It surveys the entire history of art from Egypt to modern times. That this survey is accomplished in one volume is remarkable; but even more remarkable is the inclusion of 342 color reproductions of great works of art in a book which is priced so economically.

The choice of examples for illustration is excellent. Two-thirds of the plates are reproductions of works from the Museum's own collections. The remaining one-third, which makes the survey complete, were chosen from masterpieces in the collections of the Louvre, the Uffizi, the Prado, the Kunsthistorisches Museum of Vienna, the National Gallery of London, the Rijksmuseum of Amsterdam, and other world-famous museums. Some of the reproductions, especially the smaller ones, are not especially good, but this may be overlooked in view of the quality of most and the low price of the book.

The text by Mr. Taylor is a masterly task of summarization. All major periods are included and the important characteristics of each are clearly stated. The concise style and the many plates make it an excellent reference book, not so much for the scholar as for one who wants to know more about art when he visits a museum. This book is excellent introductory reading, but it should be followed by a more leisurely approach.

Literature Relating to Staten Island

"*The Mystery of the Gulls*," by Phyllis A. Whitney. Westminster Press, Philadelphia.

Miss Whitney, Staten Island's successful writer of stories for young people, is setting a production pace that is something to watch. Her prize-winning book "Willow Hill" appeared in the early part of 1947. In the same year she copyrighted "Writing Juvenile Fiction," a book on methods. In October, 1948, "Ever After," a teen-age story, was published; and now "The Mystery of the Gulls," for rather younger folk is on library shelves.

This latest story is a real who-dun-it, though it involves no violence or crime and the principal actors are children. Other children will follow the tale with breathless interest; and it must be admitted that at least one adult did not lay it down until the mystery had been solved. We understand that the next story is to come along at Miss Whitney's usual rate of speed, and it will be awaited with anticipation by her audience. Miss Whitney conducted a class for writers at the Staten Island Museum for two years.

M.A.

"*Germes*," a monthly magazine of popular Microbiology, has as its editor Dr. Natale Colosi, whose fight against pollution of this Island's waters is making scientific as well as local history. The Associate Editor is Edythe Kershaw, M.A., Instructor in Bacteriology at Wagner College, and Nino Colosi is business Manager. The magazine is published by the Institute of Microbiology Inc., of New York, and has as its object the dissemination of knowledge about the relationship of microbes to health and human welfare. Its efforts are not limited to Staten Island, but its information about water pollution, rabies, spraying D.D.T., poison ivy, poliomyelitis and many other subjects are highly applicable here. It is well printed and attractive in form, and many of its contributors are outstanding authorities on their specialties. It is gratifying to know that this important undertaking has its offices in this community.

"*Smoke Signals*." Another and even more recent magazine project with a definite connection with the Island is the bi-monthly published by The Indian Association of America Inc. The Editor is Dolores M. Becker, and Frank E. Becker, her husband, is a Contributing Editor. Both are well known here. The magazine, of which the third number has just appeared, contains Indian lore, news concerning Indian affairs and the Indian Association, and articles bearing on the subject. The current number contains an article by Roswell S. Coles, Director of the Staten Island Museum, on Staten Island Indians, and some literature concerning them.

"*This Week*," the Herald-Tribune's Sunday Magazine, for September 25, puts the proposed bridge across the Narrows on its cover under the title "Dream Bridge;" and the article, by Bernard Simon, tells the story of David Steinman, bridge engineer, who made a plan for the bridge twenty-five years ago and has been fighting ever since to have it adopted. Steinman wrote an article for our Bulletin in December, 1945, advocating the bridge. The Herald-Tribune's article reviews the history of the tunnel-bridge controversy, and describes some of the bridges which Steinman has built, from the great St. John's Bridge at Portland, Oregon, to the Thousand Islands Bridge over the St. Lawrence.

The Herald-Tribune again came to Staten Island for an article for *This Week*, when the model apartment furnished by the Museum in the new South Beach housing project was opened recently. A generously illustrated account by Ann Pringle, describe the work of the volunteer committee and the result of its efforts.

"*The Life of William T. Davis*," by Mabel Abbott, has been received from the publishers, Cornell University Press. Price \$3.50. Persons who can call at the Davis House, 146 Stuyvesant Place, or at the Museum, 75 Stuyvesant Place, will find a stock for sale; mail orders will be forwarded by us to the publishers and books sent by them direct to the purchasers. May we suggest (without hinting, of course!) that this would be a nice Christmas present to a friend?

Edna Leona Hoffmeyer

CARLITA L. NESSLINGER

In the Museum Bulletin for July 1949 the sudden death, on June 17, 1949, of Mrs. Anton W. Hoffmeyer was recorded with deep regret. For forty-one years she was actively engaged in the affairs of the S.I. Institute of Arts and Sciences and contributed in many ways to the development of the Institute as well as of the community of which she was an integral part.

Mrs. Hoffmeyer, néé Kraft, was a descendant of the Ingersoll family who came to this country before the Revolution. She was born in North Castle, Westchester County, N. Y., July 29, 1870, and attended Public School 50, New York City. Five years after being graduated from Normal College, New York, (now Hunter College) she married the late Anton W. Hoffmeyer who is remembered by early Institute members for his active leadership in Museum affairs.

Walter Havighurst's account of this remarkable woman is excellent Americana, colorful, and redolent with the smells of gunpowder and gun oil, sawdust and sweat, sodden canvas, saddle leather, smoke from cook tent and camp fire.

Annie Oakley (she was born Annie Moses) left the family farm at the age of fifteen, and after establishing a reputation as an incredible marksman and marrying Frank Butler, a professional sharpshooter, she joined William S. Cody in 1885 as the star of his show.

It was in June, 1886, that Bill Cody's Wild West Combination, under the sponsorship of promoter Erastus Wiman, came to Erastina, Staten Island. Here fifty acres of land west of Van Pelt Avenue had been elaborately prepared for the show. Annie, however, having acquired an infected ear in Philadelphia, missed the first four performances.

Everyone came to see the show, not once, but many times, adding up to over two million people during its first Staten Island run. Among the more famous visitors were Governor Hill, Mayor Grace, Mark Twain, Henry Irving, and P. T. Barnum. Nym Crinkle, a feature writer for the *New York World*, came repeatedly. "You can't help fancying that the toot of the absurd Staten Island railroad is the yelping of coyotes," he wrote.

The book is a heartwarming narrative of a woman of strong character pursuing a placid and conventional existence in an environment that most of the time must have resembled a cross-section of Bedlam. It is Annie's story, and Frank Butler's, too, since they were happily married for fifty years, he surviving her by twenty days. It is, also, the story of the show and of those whose imagination and energy made it famous the world over.

HENRY G. STEINMEYER

The Quicksilver Pool. By Phyllis A. Whitney. (Appleton-Century-Crofts, 1955. \$3.75).

Phyllis Whitney, one of our own Staten Islanders, and a popular writer for the teen-age and young adult readers, has now written an absorbing, romantic, and historical novel for adults.

The setting, like that of a previous novel, *Step to the Music*, is in Civil War days and more particularly the story of the winter and summer of 1862-1863 on Staten Island. Wade Tyler,

recovering from war wounds, brings Lora home as his second wife and reverts to his old submission to his demanding mother. Lora works hard to find her place in a cold respectable family. She wins the love of Jemmy, her husband's young son, learns the mystery of the first wife's death, Virginia, discovers the evil intent of Morgan, the dead wife's sister, and finally gets Wade to turn away from his old memories and find true love in her.

Historically, the story involves Staten Island in the attempt of the Knights of the Golden Circle, reproachfully called Copperheads, to gain a foothold on Staten Island. This secret society of Northerners sympathetic to the South endeavors to infiltrate into the politics of New York State and to oppose the drawing up of a draft of soldiers necessary for the successful continuance of the war, eventually resulting in the draft riots of New York City.

Staten Islanders will recognize names and localities and gain a pleasant picture of a lovely island at a time when it was the favorite home and resort of both the wealthy and the distinguished.

HILDEGARD SAFFORD

The Swan of Willow Pond. By Olive L. Earle. (Morrow, 1955. \$2.00).

In her usual sprightly fashion Olive L. Earle has produced another fine story on natural history — this time about a "swan nursery." All the authentic detailed illustrations were drawn by this Staten Island author from her first-hand observations and studies. Although the book was intended for children (6-10) adults will enjoy this "peek" at the activities of a swan family. It is a beautiful nature book to add to a permanent collection.

JOSEPHINE S. ANTONINI

OUR CONTRIBUTORS

MABEL ABBOTT

Formerly Curator of History and Literature of this Institute,
and author of *Life of William T. Davis*.

JOSEPHINE S. ANTONINI

Curator of History and Literature of this Institute.

GERALD BERNSTEIN

Curator of Art of this Institute.

HARRY G. FLETCHER, JR.

President of the Staten Island Federation of Sportsmen's
Clubs.

MORRIS K. JACOBSON

President of the American Malacological Union, formerly
President of the New York Shell Club.

ROBERT F. MATHEWSON

Curator of Science of this Institute.

CARLITA NESSLINGER

Predoctoral student in mammalogy at Cornell University.
Member of American Society of Mammalogists, Sigma Xi,
and life member of this Institute.

PATRICIA O'CONNOR

Veterinarian at the Staten Island Zoo.

HILDEGARD SAFFORD

Young Children's Librarian, Stapleton Branch, New York
Public Library, and Librarian of Staten Island Historical So-
ciety.

KENNETH SCOTT

Head of the Modern Language Department of Wagner Col-
lege, Staten Island.

HENRY G. STEINMEYER

Author of *Staten Island 1524-1898* and member of the Board
of Directors of the Staten Island Historical Society.

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**PROCEEDINGS OF THE
STATEN ISLAND INSTITUTE
OF ARTS AND SCIENCES**

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Volume XVII • Number 2

Fall 1955

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AMPHIBIANS AND REPTILES OF STATEN ISLAND

ROBERT F. MATHEWSON

Illustrations by the Author



THE FENCE LIZARD
— Comparatively a
newcomer to Staten
Island.

OVER a number of years, accounts of the reptilian and amphibian populations of Staten Island have been scattered through the *Proceedings of the Staten Island Institute of Arts and Sciences*; also references to these useful animals have been made in isolated reports. This paper is intended to serve as an account of a more recent survey of the Island's amphibians and reptiles.

Staten Island is attractive enough to them to support thirty-one different kinds of these animals. The simple picture key and brief descriptions given here are designed to make identification easier for the beginner, and to afford some degree of interest for the more experienced naturalist. The earlier records have not been ignored; they have, on the contrary, proved helpful in compiling this information, and due credit is given for each reference to them. However, a great part of the data contained in this article has been compiled from the experiences of local herpetologists and the author.

AMPHIBIANS

Animals found under this heading are divided into three groups:

- I. APODA (limbless, blind, wormlike) — Caecilians
- II. CAUDATA (adults tailed) — Salamanders
- III. SALIENTIA (adults tailless) — Frogs and Toads

On Staten Island we are fortunate in having representatives of the second and third groups.

Tadpole, polywog, and larva are the terms used to describe the juvenile amphibian. Hatched from eggs, all salamanders,

frogs, and toads are quite similar in appearance at this stage of development. They spend most of their time swimming about in sheltered waterways — ponds, lakes, or swamps — feeding upon algae and insects. Like most wild creatures in that stage, they live a precarious existence. Insects, fish, birds, and mammals — even man — are amphibian predators. However, their abundant egg laying habits (as many as 20,000 eggs in some species) are the counterbalance which assures the survival of enough individuals to perpetuate the species.

A relatively few days after hatching, the habits and appearance of these young animals change considerably. The salamander larvae, which are similar in appearance to the tadpole of the frog and toad, now develop a pair of forelegs and also an appetite for the myriads of protozoans and small insect larvae found in their aquatic world. The frog and toad polywog continue on their herbivorous diet; their bodies become well rounded, and at the base of their vertically flattened tail two rear legs develop, becoming in adult life the power behind their jumping locomotion.

During spans of time which vary for the different species, these animals complete the full development of their limbs in their aquatic environment and then emerge from the water, ready to take up a terrestrial mode of life. Most of the salamanders immediately seek the moisture of the woodland floor, finding habitats in leaf mold, rotted logs, and under stones and mossy growth. Some species continue their aquatic existence, coming to land only to find insects in response to their appetites.

Part of the dictionary definition of the word "salamander" is "anything that can stand great heat." Even though it may appear to be a misnomer for the animal under discussion, at one time there seemed to be good reason for the name. Long before the advent of the central heating system with its automatic coal, oil, or gas supply, man found his store of heat locked in the forest trees. These trees, particularly the dead ones on the forest floor, were the homes of many species of salamanders. It may have been a common occurrence that, after a log was placed in the fire and had become uncomfortably hot, the amphibian hidden there would migrate to cooler regions, causing the onlooker to see what would appear to be a fire-dwelling animal — hence "salamander."

Being cold-blooded animals, the amphibians, like the reptiles, can stand neither high temperatures nor great cold. During

the warmer parts of the year the salamanders bury themselves beneath the cool earth (aestivation); likewise, when winter approaches they again seek the relatively warm sanctuary of the underground (hibernation). Some frogs and turtles bury themselves in lake-bottom mud, but all other reptiles and amphibians seek an underground home in which to hibernate during the cold weather.

Unlike the salamander, the frog and toad at the end of the tadpole stage emerge from their aquatic habitat as tailless animals with considerably enlarged hind legs and a voracious appetite for insects. Locally, the terrestrial habitats of some species are usually within jumping distance of the lake or pond in which they spent their youth. Other species, like the tree, wood, and field frogs, roam both field and woodland, but always, however, in close proximity to a moist situation. The fact that a rather large percentage of respiration in the amphibian is carried on through the skin accounts for this pattern of behavior.

A visit to any Staten Island lake, pond, swamp, or bog in the spring of the year will attest to the fact that the male amphibian, whether frog or toad, has a voice. Long before ice has thawed from the pond one can hear the low croak of the wood frog accompanied by the high pitched call of the peeper, joined later by the notes of the pickerel and leopard frog (see key). At some time during the year all frogs use their voices — for serenading their lady-loves and, on occasion, to sound a danger call. These harbingers of spring contribute, perhaps, a small part to the stimulus that awakens the other reptiles and amphibians from winter hibernation.

REPTILES

TURTLES

The turtles are an interesting group of reptiles, if for no other reason than the fact that they live inside their bones. This is literally true, for examination reveals that the bony plates comprising the shell are joined to the backbone and ribs. This shell serves as a protective covering, and in most turtles it is adequate protection. The shell of the snapping turtle, however, falls somewhat short of providing complete protection, and much of this animal's fleshy parts are vulnerable to attack. However, the powerful jaws of an adult snapping turtle act as a persuasive deterrent to his enemies. Turtles do not possess teeth. Both the

characterized by growths of pest oak, black jack oak, scrub pine, and other plants found in geologically comparable southern areas.

This latter type of habitat was ideally suited to the twenty-nine specimens of fence lizard, *Sceloporus undulatus bairdianus*, that were released by Carl F. Kautfeld¹ in April, 1942.² A recent census indicates that this reptile has definitely established itself as a member of the reptilian fauna of Staten Island.³

The growing interest in reptiles has resulted to the adoption and subsequent release of pers., causing the introduction of many unusual forms to Staten Island. Any questions concerning these animals may be directed to the author.

The great differences in the color, shape, and pattern of the local reptiles and amphibians were helpful in preparing the simple accompanying picture key. Tests of this key indicate that no confusion should be encountered, if the animals in question are compared with the pictures and short descriptions given.

**

FROGS AND TOADS

1. SPRING PEEPER — *Hyla crucifer*:

The spring peeper competes with the wood frog in attempting to be the first visitor to the ponds and swamps in the spring of the year, often arriving in March or April before the ice has thawed. It also vies with the cricket frog for the distinction of being Staten Island's smallest frog (1-1 1/4 in.). The high-pitched notes and trills of a large chorus of these frogs can be heard for a surprisingly long distance, sometimes for a mile. The uninitiated discover with some surprise that this sound is emitted by a frog rather than by an insect.

The spring peepers are readily identified as belonging to the same family (*Hylidae*) as the tree toads. Close examination of the tips of the fingers and toes reveals distended, padded tips similar to those found on the arboreal tree toad. Another character which assists in identification is the dark dorsal pattern shaped like an oblique cross.

Occurrence — common.

¹ Curator of Reptiles, Staten Island Zoo.

² *Animal Land Bulletin*, Staten Island Zoo, 1946, Vol. 13 — 5

³ *Ibid.*, Staten Island Zoo, 1955, Vol. XII — 5

2. TREE TOAD — *Hyla versicolor*:

This small (2-1/2 in.) arboreal toad with its enlarged toe tips (actually suction pads for climbing) has a rough warty skin which prevents the loss of moisture and enables the toad to tolerate the dryness of its habitat, which is the foliage of trees and bushes.

With the increase of human populations this vari-colored tree toad (pale brown to ashy gray) has become less and less abundant. Its late breeding habits (April-May), coupled with the gradual disappearance of the quiet undisturbed pools of water, are probably responsible for this decrease in numbers. Few habitats on Staten Island now include all the factors necessary for the comfortable existence of this toad. Visits to these remaining areas, during the breeding season, reveal the small brownish egg masses which hatch in the short time of four or five days. The young, however, do not metamorphose until some four months later. Thunder storms and heavy humid weather during the breeding season seem to stimulate these animals, and at this time quick successions of their loud resonant trill can be heard great distances from the pond.

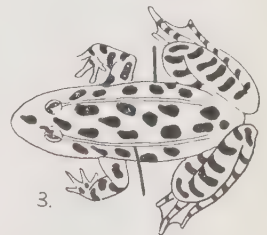
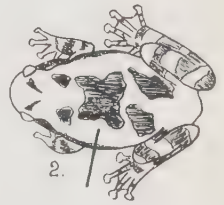
Occurrence — not common.

3. LEOPARD FROG or SHAD FROG⁴ — *Rana pipiens pipiens*:

The leopard frogs are probably Staten Island's most common species, rivaled in numbers only by the green frog. They make their appearance early in the spring (March — April) only a few days after the spring peepers have reached the ponds. The eggs (3,000 — 5,000) are laid at this time and take from two to three weeks to hatch. Leopard frogs have very low voices which do not carry far from the pond in which they are breeding. The fully formed frog emerges from the water in about two months. Adult frogs attain a maximum size of 4-1/2 inches.

Unlike the dark bordered square spots found on the backs of the pickerel frogs the spots of the leopard frogs are roundish and light bordered. One of the many common names for this frog is "meadow frog," and, as it suggests, these animals are often found in open fields which include a moist habitat, as well as in many of the small Staten Island ponds.

Occurrence — common.



⁴ *Proceedings of the Natural Science Association of Staten Island*, Vol. VII, No. 2, Dec. 10, 1898.



4. PICKEREL FROG — *Rana palustris*:

The double row of square, dark bordered spots on the back of the pickerel frog distinguishes it from the somewhat similar leopard frog.

The voice of the male frog, in the breeding season (April — May) is somewhat muffled because these frogs emit their calls while beneath the surface of the water. The eggs which are laid at this time number two or three thousand and hatch in about two weeks, the fully developed frogs emerging from the pond in about twelve to fifteen weeks. For a short time they make their home near the water's edge and reveal themselves, when disturbed, by a tremendous leap from the shore into the protection of the pickerel weed and other aquatic plants.

Locally the pickerel frog can be found in the open moist meadows and along the borders of the marshes in the Fresh Kill area.

Occurrence — common.

5. WOOD FROG — *Rana sylvatica*:

The first amphibian sound to be heard in early spring is the deep, duck-like croak of the wood frog. The short aquatic stage of the wood frog tad-

pole (45 to 65 days) enables the adults to lay eggs in the shallow temporary ponds that result from the winter thaws. The din caused by a few hundred of these frogs calling from a small pond is almost more than the ear can stand. Soon after the breeding season the frogs leave the water and migrate to the woodlands. Excellent camouflage is provided by their color change from a dark blackish brown during the breeding season to a soft tan, resembling dead leaves, while in the woodland habitat. This small frog (3 in.) is often found great distances from water, but always in moist areas.

Occurrence — common.

6. GREEN FROG — *Rana clamitans*:

The green frog spends the greater part of its life in or near the water. A walk along the edge of most Staten Island ponds, streams, swamps, and other waterways, on a summer day, is accompanied by the occasional banjo-like "glunk! glunk!" and splash of the green frog. The tadpole of this species spends a full year in the water before metamorphosis takes place in the spring

after ice thaws. The only tadpole to compete in this respect is the bull frog which sometimes spends two years in its aquatic phase. The eggs are laid in small groups; however, the total complement may number as many as 4,000 eggs. Adult green frogs reach a body length of four inches.

Occurrence — common.

7. BULL FROG — *Rana catesbeiana*:

No confusion exists concerning the identity of the bull frog after one hears its bass voice and the resonant call "jug-o-rum," although bull and green frogs are enough alike as juveniles to be easily confused. A character by which quick identification can be made is the small ridge of skin (see key) which, in the bull frog is found only behind the eye and tympanum (ear).

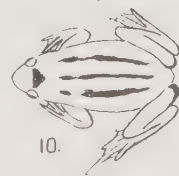
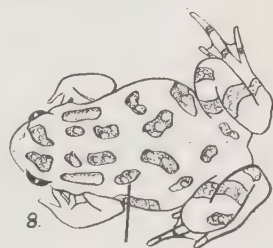
Bull frogs have a voracious appetite and will feed upon anything that moves and can be swallowed. This habit, with its cannibalistic aspect, isolates individuals except during the breeding season in June and July. The larger Staten Island ponds, such as Wolfe's Pond and Flagg's Pond, and some isolated swamps, are the habitats of these larger amphibians, whose body length is five to six inches. It is in these ponds that the eggs (10,000 to 20,000) are laid. The adult frogs remain in the water and are probably our most aquatic frogs.

Occurrence — not common.

8. FOWLER'S TOAD — *Bufo woodhousii fowleri*:

The definite character that separates this dry warty amphibian from its close relative, the American toad, is the presence of more than one tubercle in each of the large dark spots found along the back. No records of the American toad have been reported from Staten Island. Fowler's toads come from hibernation and start breeding in April. If the temperature drops they soon bury themselves again and await the favorable conditions of 58° to 60° F. The eggs are laid in shallow water in long ribbon-like gelatinous masses, numbering as many as 8,000. In a few weeks the young emerge from the pond and take up an almost permanent terrestrial existence. The adults reach a maximum size of 3-1/4 inches.

The gentle nature, pleasant appearance, and interesting behaviour of these animals make them



excellent pets. With the advent of the automobile⁵ and the encroachment of human society on their habitats, populations of Fowler's toads are becoming more and more scarce.

Occurrence — not common.

9. SPADEFOOT TOAD — *Scaphiopus holbrookii*:

The enlarged horny spines found on the inside surface of the hind feet, which enable this animal to bury itself beneath the surface of the ground, are the reason for the name "spadefoot." Another character which identifies it is the presence of vertical (cat-like) pupils in the eyes. Spadefoot toads are rarely seen on the surface; they seek an entirely subterranean habitat. Sometimes sudden heavy showers will cause them to surface and seek one of the small temporary ponds caused by the rain, in which to breed and to lay their strings of eggs. At this time their coarse crow-like calls can be heard. Unlike other local species of frogs, they breed only during or immediately after rain, from March to September. The tadpoles hatch in one or two days and transform in a period varying from two weeks to two months, depending upon the evaporation rate of the pond.

Adults measure from two to three inches in body length.

Occurrence — rare. We have only one record of a breeding site, and that is on private property.

10. CRICKET FROG — *Acris gryllus crepitans*:

This small tree frog (1-1/3 in.) has the appearance of a true frog (*Rana*). Only three localities on Staten Island are known for this amphibian. However, it is possible that it may have been overlooked because of its small size and soft clicking voice.

Cricket frogs breed throughout the early spring and summer — from February to October; however, locally they collect around the breeding site during April and May. The greenish ground color and tubercular skin, together with the absence of the oblique cross, distinguish this frog from the spring peeper.

Occurrence — not common.

11. SWAMP CRICKET FROG — *Pseudacris nigrita triseriata* (not illustrated):

In 1884, William T. Davis, in a paper entitled "Reptiles and Batrachians of Staten Island,"⁶ reported the presence of *Acris*

⁵ *Proceedings of the Staten Island Institute of Arts and Sciences*, Vol. III, Parts 1-4, Oct. 1924 — May 1925, p. 116.

⁶ *Proceedings of the Natural Science Association of Staten Island*, Extra No. 1, Oct., 1884.

gryllus Syn. *Acris gryllus crepitans* on Staten Island. In 1910 he also reported from a marsh situated between the Annadale Railroad Station and Seguine's Pond the occurrence of *Chorophilus triseriatus*⁷ Syn. *Pseudacris nigrita triseriata*, and he confirmed this report by comparing their voices and other characteristics with New Jersey specimens which were then also called *Chorophilus triseriatus*. Recent collections and literature indicate the occurrence locally of only *Acris gryllus crepitans*, and in New Jersey the occurrence of only *Acris gryllus crepitans* and *Pseudacris nigrita feriarum*. They also give the range for *Pseudacris nigrita triseriata* as Oswego, New York, west to Lake Ontario; northeast Arizona, Utah, Nevada, Idaho; and south to Arkansas and Louisiana. Therefore, it is possible that this addition to our amphibian fauna was *Pseudacris nigrita feriarum*, which has since become extinct.



SALAMANDERS

11. TWO-LINED SALAMANDER — *Eurycea b. bislineata*:

The slender cylindrical body, with a tail which is strongly compressed vertically, suggests the aquatic habitat in which two-lined salamanders are almost always found. The ground color varies from a dull green to an orange yellow and brown. A dorsal light band which runs from the head through the entire length of the body and tail creates the two-lined effect which gave rise to the salamander's name. The maximum length of adults is 3-1/2 inches.

Occurrence — fairly common.

12. RED BACKED or LEAD BACKED SALAMANDER — *Plethodon cinereus*:

Smallest of our salamanders, adults of this species measure under three inches. This slender, completely terrestrial salamander has a rounded tail which is slightly compressed at the tip. The costal grooves on the sides of the body number 18 to 19. There are two color phases of this salamander. One phase is

⁷ *Proceedings of the Staten Island Association of Arts and Sciences*, Vol. III, Part II, Apr. 16, 1910.



characterized by a stripe that runs down the middle of the back and ranges in color from a light gray through yellow to a bright red. This stripe, contrasted with the dark color of the sides, accounts for the name "red backed." On the lead backed or dark phase the color is dark brown to black on the dorsal side, with a belly of light gray.

Occurrence — common.

13. DUSKY SALAMANDER — *Desmognathus f. fuscus*:

This salamander is extremely variable in pattern and color. A full grown adult (3-1 1/2 in.) is a rather bulky animal. The head is somewhat enlarged at the angle of the jaw, with the anterior portion ending in a blunt snout. The mottled dusky brown color, ranging to cream, is quite unlike that of any other Staten Island salamander. The female dusky salamander lays her eggs and stands guard over them under rotting logs and moist stones in the vicinity of water. The hatching larvae find their way into the water, where they spend the next nine to ten months before they emerge as adults.

Occurrence — common.

14. RED SALAMANDER — *Pseudotriton r. ruber*:

Largest of the local salamanders, this animal attains a maximum size of 5-1 2 inches. The clear brilliant red color of the dorsal surface, with its speckling of small round black spots and the salmon pink color of the ventral surface, identify this salamander. The gradual disappearance of its specialized habitat — clear cold springs and streams — dooms this species to extinction in the near future.

The eggs are laid in the late fall in cold clear water on the under side of stones. They hatch in early winter, and the young subsist on the food absorbed from the yolk until the spring thaws the ice and the aquatic insects become active.

15. WATER NEWT — *Triturus v. vireescens*:

On Staten Island individuals of this species, with few exceptions, are strictly aquatic, propelling themselves about, in quest of worms and aquatic insects, by using their fin-like tails. The eggs are laid singly, usually attached to some aquatic plant. The young transform from a gilled larva into the adult in about three

months. At this time the two rows of spots on the sides of the body (see key) develop the bright reddish hue characteristic of the adult. The ground color of the adult is a rich deep green.

In areas outside Staten Island these salamanders develop a land stage, at which time their color changes to a bright salmon red. They are then known as Red Efts, and are quite common in the woodlands, particularly after a rain. At a later date the red eft reenters the water and resumes the characters suitable for an aquatic existence. No completely satisfactory explanation has been offered for the absence of the terrestrial form on Staten Island.

Occurrence — not common.

FOUR-TOED SALAMANDER — *Hemidactylium scutatum* (no illustration)⁸:

Species extinct on Staten Island.

SPOTTED SALAMANDER — *Ambystoma maculatum* (no illustration)⁹:

Species extinct on Staten Island.

MARbled SALAMANDER — *Ambystoma opacum* (no illustration)¹⁰:

Species extinct on Staten Island.



TURTLES

As one might suspect, Staten Island's geographic position has made it an occasional refuge for the large chelonians (turtles) that inhabit the sea. The lack of available space to cover the unusual conditions associated with these visits prompts us to ignore this group of reptiles entirely.

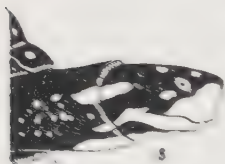
16. DIAMOND-BACKED TERRAPIN — *Malaclemys t. terrapin*:

The diamond-backed terrapin is highly prized for its flesh. It inhabits the brackish creeks which flow through the salt marshes of Staten Island. Unusual prices are paid for these turtles in the food markets, and for this reason they have been heavily hunted. Many of the coastal states have enacted legislature protecting these animals.

⁸ *Proceedings of the Natural Science Association of Staten Island*, Vol. IX, No. 2, Dec. 12, 1903.

⁹ *Proceedings of the Staten Island Institute of Arts and Sciences*, Vol. VI, Parts 2-4, 1931-1932, pp. 161-162.

¹⁰ *Ibid.*, pp. 161-162.



The color of the adult ranges from gray to dark brown and black. A characteristic marking is found in the concentric grooves engraved in the plates of the carapace. The eggs (four to ten) are laid in the mud along the banks of tidewater creeks. Hatching takes place early in August, and the young turtles feed upon small aquatic snails, worms, and insects in preparation for a winter of hibernation in the mud. The color of the adult ranges from gray to dark brown and black.

Occurrence — not common.

17. SNAPPING TURTLE — *Chelydra s. serpentina*:

Watching a large snapping turtle lumber across the ground with mouth agape, with warty skin, and with pronounced bony spines of carapace and tail, one sees a bit of the past projected into the present. Little morphological change has occurred in the modern snapping turtle since the days of its Pleistocene ancestor. The strong jaws, which are unhesitatingly employed in times of danger as well as in the quest for food, have apparently served these animals well. The rough appearance, due to the characters mentioned above, is evident from birth and should leave no uncertainty as to this turtle's identity. Snappers are the largest turtles occurring on Staten Island, and specimens weighing up to 35 pounds have been recorded. Fortunately, young snapping turtles are included in the diet of many birds and mammals, and adult specimens are hunted by man for food. The numbers of these turtles are thus kept under control, and the survivors are consequently encouraged to make full use of their scavenging propensities.

The snapping turtle's eggs, which are like slightly smaller editions of a ping pong ball in shape, hard cover, and bouncing properties, are laid in June and hatch in September.

Occurrence — common.

18. SPOTTED TURTLE — *Clemmys guttata*:

The spotted turtle's dark blackish background color, with contrasting pattern of yellow orange spots, should leave no doubt in the observer's mind as to this animal's identity.

Within the memory of the author, local field trips to Staten Island ponds used to reveal the presence of many of these small turtles (4 to 5 in.). Only two specimens have been observed on similar trips taken during the past five years. Speculation suggests the encroachment of man as the cause of this depletion. Like wood turtles, spotted turtles are occasionally found roaming the woodlands at great distances from water. The eggs are laid in depressions scooped out of loose earth near a pond by the female, who uses her hind legs for this scooping process. Laid in June, the eggs hatch in late August or early September.

Occurrence — not common.

19. WOOD TURTLE — *Clemmys insculpta*:

A report in the natural history records¹¹ of the Museum indicates the introduction of this turtle to Staten Island. These introduced specimens and subsequent immigrants have provided our woodlands with a large population of wood turtles. Unlike its closest local relative, the spotted turtle, the wood turtle is mainly terrestrial, seeking water only during the mating and hibernating seasons. The eggs, numbering eight to twelve in a clutch, are buried beneath the sunbaked earth and are hatched about four months later in early October. Adults reach a maximum size of nine inches.

Wood turtles make excellent pets. They are alert and respond quickly to kind treatment. There are many accounts in the records of their ability to learn simple tricks.

Occurrence — not rare.

20. PAINTED TURTLE — *Chrysemys p. picta*:

A summer day, a pond, a log, and a painted turtle all go together. Practically every Staten Island pond and lake has its full complement of painted turtles. Rarely are these animals seen away from the water. It is believed by some herpetologists that, at the approach of winter, specimens that have spent their summer in shallow water migrate to deeper ponds to hibernate. The sharply contrasting red and yellow coloring of the edge of the carapace and entire surface of the plastron, against the deep brownish black of the carapace, gives this animal the appearance

¹¹ *Proceedings of the Staten Island Institute of Arts and Sciences*, Vol. III, Parts 1-4, 1924-1925.

of being painted — hence its name. The eggs are laid in June and July and hatch in September. Adult specimens reach a 6-inch body length.

Occurrence — very common.

21. BOX TURTLE — *Terrapene c. carolina*:

A walk on a summer day through any of the relatively undisturbed Staten Island woodlands can still result in the discovery of the interesting box turtle. The serene bliss of complete privacy is within the grasp of this reptile. Nature has endowed it with a hinged plastron which, when needed as protection from enemies, can be used to box in completely all the soft tissue of this animal. The ownership of a hinged plastron is not individual to the box turtle. Both the mud and musk turtles are so blessed; however, the inadequate size of the plastrons of these turtles leaves much to be desired in the way of protection.

Adult box turtles reach six inches in length and about three to four inches in the height of the carapace. The eggs (4 to 6) are laid in June and hatch in late August or early September.

Occurrence — common.

22. MUD TURTLE — *Kinosternon s. subnigrum*:

As its name implies, this small turtle (4 in.) is usually found in the muddy bottoms of ponds and lakes. Here on Staten Island the muddy marshlands and creeks bordering the Kill van Kull are also their habitat. Mud turtles are probably of great economic value as scavengers.

Few specimens are reported, but this animal is very secretive and chooses a habitat not likely to be disturbed; therefore it is difficult to estimate local populations.

23. MUSK TURTLE — *Sternotherus odoratus*:

This species is known as the musk or stinkpot turtle because of the strong disagreeable odor it can emit from the glands situated along the border of the carapace. Undoubtedly, this strong scent is employed to discourage enemies. However, it is not nearly as effective as the biting jaws possessed by this animal.

The small size of the musk turtle (4 in.) and its nondescript brownish coloring, which often is covered by the algae of its aquatic habitat, aids in this reptile's secretive behavior. The only time it forsakes an aquatic habitat is during the egg-laying period, when in June it scoops out a hole on a sandy shore and lays a clutch of three to five eggs. Incubation is left to the warmth

of the sun or of decaying vegetation, and the eggs hatch in late August or early September.

Occurrence — similar to the mud turtle.

MUHLENBERG'S TURTLE — *Clemmys muhlenbergii* (no illustration):

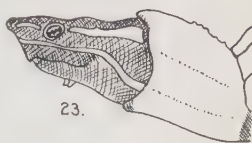
Although three specimens have been reported on Staten Island since 1902¹², it is believed that this species is not indigenous.



21.



22.



23.

SNAKES

24. DE KAY'S SNAKE — *Storeria dekayi*:

This small, secretive snake attains the average length of 12 inches. The ground color is soft tan or brownish gray, with a series of small black dots arranged in pairs along the midline of the back. The underside is pinkish white or pale tan. Although seldom seen, this reptile is probably one of our most common snakes. Almost every field or wooded area yields individuals, if sought. They feed upon worms, slugs, salamanders, and insects. The young, numbering about a dozen, are born alive in July or August.⁴

Occurrence — common.

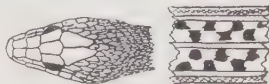
25. GARTER SNAKE — *Thamnophis s. sirtalis*:

The garter snake is probably one of the best known as well as the most common of our local species. Probably everyone who has a vegetable or flower garden has been surprised by the sudden presence of a garter snake. As the name implies, the general appearance — a greenish-yellow ground color with three bright yellow stripes running the entire length of the body — is not unlike that of the old-fashioned garter or arm band.

The garter snake vies with the De Kay snake in numbers. It is larger in size (2 ft.) and less secretive in habits, and so probably more vulnerable to predators. Perhaps a compensation for this is the extremely large litters, thirty to eighty young, which are born alive in midsummer. Like the water snake, the garter snake emits a musky odor when



24.



25.

¹² *Proceedings of the Natural Science Association of Staten Island*, Vol. VIII, No. 17, Nov. 8, 1902.

attacked or handled.

Occurrence — common.

26. BANDED WATER SNAKE — *Natrix s. sipedon*:

This bad-tempered snake can be found hunting fish, frogs, and other aquatic life along the banks and in the water of our many lakes, ponds, streams, and swamps. Its scales are heavily keeled — that is, there is a pronounced ridge down the center of each scale, which gives the reptile a decidedly rough appearance.

More than any other local species, the banded water snake is popularly suspected of being poisonous. Its aquatic habitat suggests to the uninformed that it may be a poisonous water moccasin. The coppery-hued head and dirty brown color of older specimens suggest the poisonous copperheads, and the shape of the head with its distinct bulge at the angle of the neck (arrow-head shape) often reinforces the conviction that this innocuous reptile is indeed poisonous.

Young specimens, unlike the old adult, are contrastingly colored, with a rich deep brown ground color interspersed with reddish irregular cross bands. The undersides are yellowish white, brightly marked with splotches of red. Adults reach a length of three feet and a diameter of 1-1/4 inches. During the month of August as many as 36 young are born, alive.

Occurrence — common.

27. BLACK SNAKE — *Coluber c. constrictor*:

The black snake is the largest Staten Island serpent, individuals from four to six feet long having been observed.¹³ This highly nervous animal is keenly aware of its environment and is swift to escape if disturbed; however, if cornered, it does not hesitate to attack. Another evidence of the high-strung nature of this snake is the vibrating of the tail when annoyed. If this is done while the tail is buried in dry leaves or similar vegetation, the sound is not unlike the rattle of the rattlesnake. Such characters are not conducive to friendliness and hence, unfortunately, this animal is slowly being exterminated. Economically the black snake is important because its diet consists almost entirely of rats and mice. Nationwide statistics show that these rodents not only spread disease but destroy millions of dollars' worth of goods and

¹³ *Proceedings of the Staten Island Institute of Arts and Sciences*, Vol. I, Parts 1-3, Oct. 1920, pp. 59-61.

food annually which is only one indication of why this snake should be protected.

Adult black snakes have a satiny black color above and a blue gray color on the undersides. This snake is oviparous, laying sometimes as many as 24 eggs in moist warm situations. The eggs hatch in about two months.

Occurrence — not common.

28. MILK SNAKE — *Lampropeltis t. triangulum*:

The farmer's suspicion that cows went dry because they were milked by snakes during the night accounts for the name of this reptile. The short recurved teeth of all our local serpents make this act impossible. The diet of the milk snake, like that of other snakes, consists of rodents, and this accounts for the snakes presence in dairy barns.

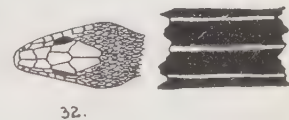
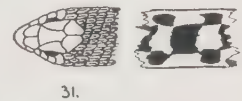
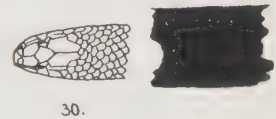
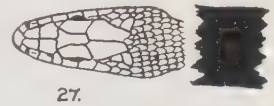
The gray or tannish ground color, patterned on the upper surface with blotches of chestnut or red and bordered with black, and the checkerboard black and white pattern of the undersides make the milk snake an attractive reptile. The young, which are particularly brilliant in color, are born from eggs, which number 16 to 20 in a clutch. An incubation period of two months is required before hatching takes place in September.

Occurrence — not common.

29. RING-NECKED SNAKE — *Diadophis punctatus edwardsii*:

The bright yellow collar around the neck of this snake outlined against the blue-black color of the body, lends this animal an exotic appearance, which is emphasized by the bright yellow orange of the ventral scales.

Evidence that Staten Island is in the zone of intergradation between the northern *Diadophis punctatus edwardsii* and the southern *Diadophis p. punctatus* is found in the patterns of the local specimens. Individuals with complete to interrupted neck rings, and also individuals with and without spotted ven-





33

trials can be found. In southern forms the yellow neck ring is broken and the belly marked with black spots. The northern form has the ring entire and the belly usually immaculate.

The average length of local specimens is twelve to fifteen inches. The small clutch consisting of three to eight eggs is laid in July and hatches some time in late August or early September.

Occurrence — not common.

30. WORM SNAKE — *Carphophis a. amoena*:

Even though but one record of this reptile exists (found in Travis by the late Peter Crowe of the Staten Island Museum¹⁴), it is still possible that this extremely secretive wormlike snake may still occur on Staten Island. The ground color of pinkish brown, with the blunt head and tail give this animal the general appearance and color of the earthworm. Continued search in habitats such as decaying tree stumps, rotting logs, and beneath stones might yield further specimens. The adult worm snake is eight to nine inches long.

HOG-NOSED, RIBBON, AND GREEN SNAKES:

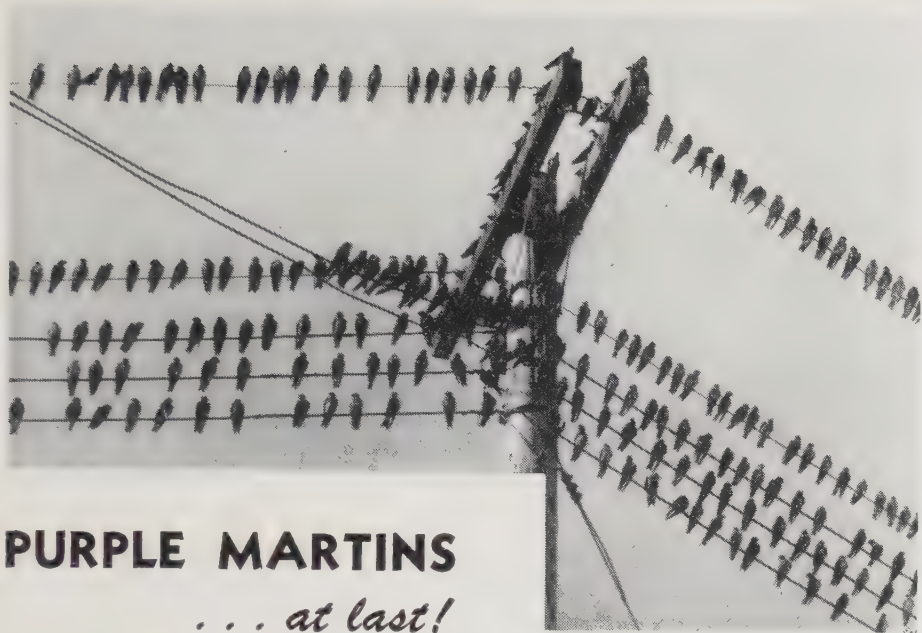
The complete absence for the past few years of any reports on the Hog-nosed Snake (31) and Ribbon Snake (32) prompts the conclusion that these species have become extinct locally. A single specimen of the Green Snake (33) was discovered in July, 1952, in Rosebank¹⁵. However, until more specimens are collected, this individual will be considered an introduction. The examples of these snakes, shown in the picture key, are complete enough to assure an accurate determination of any specimen found.

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¹⁴ *Proceedings of the Staten Island Institute of Arts and Sciences*, Vol. 9, Parts 1-2, 1938-1940, p. 25.

¹⁵ *Proceedings of the Staten Island Institute of Arts and Sciences*, Vol. XIV, No. 2, Fall 1952.



PURPLE MARTINS

... at last!

HOWARD CLEAVES

PURPLE MARTINS assembled in New Jersey for the fall migration to South America.

This is a Staten Island bird success story.

At this time, when the Island — long known to be the most rural and least urbanized of New York City's five boroughs — is visibly succumbing to the pressures of increasing population; when, due to the destruction of suitable nesting habitats, Richmond Borough is losing as many as two or three breeding species of birds in a single year, it is an event to gladden all birders when a bird, long wanted, finally responds to offers of hospitality and establishes itself on our island as a new nesting species. This is what the purple martin, largest of American swallows, has done.

At the start of the century, when our family moved from Illinois to Staten Island via Philadelphia and Brooklyn, I was already steeped in the exciting pursuit of knowledge concerning wild life in general and birds in particular, although I was only of grammar school age. As the years passed and I was able to make trips into New Jersey, up the Hudson River, out to Long

Island, and even as far as Pennsylvania aware that, in these localities, there were covered on Staten Island. This bird was

Because of its large size (it is easily its vocal versatility, and its gregarious martin became more and more interesting to me. I could find in bird books about purple martins (both in conversation and by mail) of which I was interested in birds. When, in 1913, I was invited by Thomas A. Edison to take me to South Carolina, one of the many reasons was the abundance of purple martins. I saw many multiple-roomed bird houses but in groups atop poles.

I learned that there were colonies of purple martins on Staten Island as Plainfield, Freehold, and Jersey; at Poughkeepsie to the north, and at New York to the northeast. Piecing together this information that I had gathered about the purple martin, I was within reason to hope that this bird might be found on Staten Island, although I could discover that it had ever done so. One explanation was that it had never erected a proper martin house in this site on Staten Island.

By 1916 I had saved enough money to buy martin houses made by the late J. Warren Smith of Pennsylvania. These I placed on separate poles, high, ten feet apart, in our back yard on Staten Island near the S.S. White Dental Manufacturing Company in Prince's Bay. To my surprise and joy I found that the number of eight or ten — inspected in the summer of 1917. One pair actually nested and either two or three young. One of these was able to remove from the nest chamber for me an aluminum band on its leg. At that time I was with the American Bird Banding Association, a pioneer bird banding operations in the United States to 1920. Although but a single pair was memorable year 1917, a number of "kingbirds" present almost daily in the

non-breeders — possibly unmated yearling birds — attach themselves to a colony as "fringe" individuals, at least in the early years of its formation.

A decision had to be made about the martin houses when, in March, 1918, we moved from Prince's Bay to Huguenot Park. I decided to move them to the new location — a scant two miles away. In the early summer of 1918 a few martins inspected the houses in our yard at Huguenot Park. They alighted on the houses and appeared to have accepted them in the new place, but, after two or three days, the birds disappeared and did not return. Recently I have been told of a case in which a martin house was moved not more than a hundred yards between seasons. When the martins returned they hovered about the old site a few times, then departed, refusing to accept the house in its new situation. These birds, it seems, can be highly choosy and temperamental.

In November, 1918, I left Staten Island to fill positions in other parts of the country. On returning almost ten years later, I found the martin houses had disintegrated — gone with the wind. Not until the late 1940's did I again turn my efforts toward the long neglected martin project. Marriage and child rearing, plus the "depression" years, had deflected me from the purple martin theme.

Then, with revived interest, I bought a single 12-room martin house for \$11.00 from Sears Roebuck in Chicago. Sandy and Margaret Cuthbert readily gave me permission to place it atop a clothes pole near their boat livery beside Lemon Creek in Prince's Bay. My choice of this site was based on a hunch. It was only about three hundred yards from our old place on Purdy Street, where the one pair had nested in 1917. The spot is near water, which the martins seem to like, and it is in the midst of human activity — traffic on the creek, men working on boats, and so on — which apparently these birds do not object to in the least. Anyway, it worked!

In 1951, two pairs nested. In each of the two nests four eggs were laid. One pair abandoned their eggs and deserted. The other pair hatched three of the four eggs, but all three young died in the nest, presumably as the result of a hard northeasterly storm that drove rain through cracks into many of the nest compartments. The dead young were in the pinfeather stage. Although only two pairs nested and laid, there were "kibitzer" birds present to the number of six or eight all through the 1951 season.

In 1952 nothing happened — not a single pair nested; but prior to the 1953 season radical changes were made in the housing arrangements for the birds. The Sears Roebuck house was removed from the Cuthbert clothes pole and relocated in a yard near Wolfe's Pond. A 12-room Bishop martin house, costing \$22.00, not previously mentioned, had been erected near the outlet of Wolfe's Pond in the Andersons' yard. Martins inspected it but none made use of it, although tree swallows nested in a single room of this house for two seasons. The most important contribution to the cause was the construction of two 16-room martin houses by boys at the McKee Vocational High School, from materials furnished by the Institute. One of these houses was placed on the Cuthbert clothes pole, the other was placed atop a pole at the south end of the Lemon Creek bridge. In 1953, six pairs of purple martins successfully nested and reared young in these two McKee houses — four pairs in the clothes pole house and two in the house at the bridge. A careful inspection, room by room, when eggs had hatched but the young had not yet feathered, resulted in an inventory of eighteen young — an average of three per pair. One pair had only one offspring, another pair had five, and the rest varied in between.

The martins returned in force in the spring of 1954, first arrivals being noted on April 19. Because it was felt that the use of a ladder for close inspection might unduly disturb the birds, no actual inventory of young was undertaken, but careful observation with binoculars established that fourteen pairs nested and produced young in 1954. Occupied chambers are easily identified by the frequent visits of the parent birds with insect food after the eggs have hatched. Both parents take part in the feeding. Using the average of three young per pair established by count in 1953, the fourteen breeding pairs in 1954 presumably brought off close to forty young, minus several that fell to the ground and perished. The majority of the 1954 birds chose the clothes pole house, probably not more than three pairs using the bridge house. As in 1917, 1951, and 1953, non-breeding extras or "kibitzers" were present throughout the season of 1954. The two houses near Wolfe's Pond continued to be ignored.

William Schultheis, bridge operator at Lemon Creek, reported martins first seen on May 2, 1955. Because of repairs to the bridge the martin house at that site had been taken down by workmen some time in April and carried to my home for repair

and painting. It was not put up again until early June, when many pairs of martins were carrying nesting materials into all but two or three of the rooms in the clothes pole house. Within minutes after the second house was again erected — on a new pole a few yards east of the clothes pole house — martins alighted on it and soon began to carry nest material into several of its sixteen rooms. It was noticeable that these birds included only one or two purple males, whereas the males belonging to the pairs occupying the clothes pole house were all, or nearly all, full purple individuals. The complete purple-black, iridescent plumage is the badge of full maturity in the male purple martin. The adult female is gray underneath. I concluded, therefore, that the martins which took such prompt possession of the second house — which, for convenience, can be called No. 2 house — were surplus birds, possibly yearlings or two-year-olds from the previous two seasons, or perhaps "kibitzers."

The demand for space appeared so brisk that I erected a third martin house on a pole about fifteen feet east of house No. 2. However, this was not accomplished until June 19, 1955, and by that date all qualified individuals were paired off and established in the other two houses. No. 3 house was inspected at once by what I took to be "kibitzer" individuals, several of them perching on it frequently, going in and out of its eighteen rooms, and using it as a night roost. This third house was purchased for \$15.00 at Cape May Courthouse, New Jersey, and, it is hoped, will accommodate both surplus and "kibitzers" in 1956.

Frequent visits were made to observe the martins from early May until the last two individuals were seen at dusk on August 21, 1955. Many interesting details in the home life of the birds — nest building, notes and calls, flight habits, feeding of the young, even their roosting practices at night — were carefully observed. Lack of space prevents the inclusion of these details here, and a separate piece at a future date will be necessary to do justice to the information gathered.

In order to determine the number of actual breeding pairs with young in 1955, without disturbing the birds by placing a ladder against the poles, I made a diagram or plan showing the east, north, west, and south sides of both occupied houses (Nos. 1 and 2), each individual room being shown on the paper plan which

(Continued on page 56)

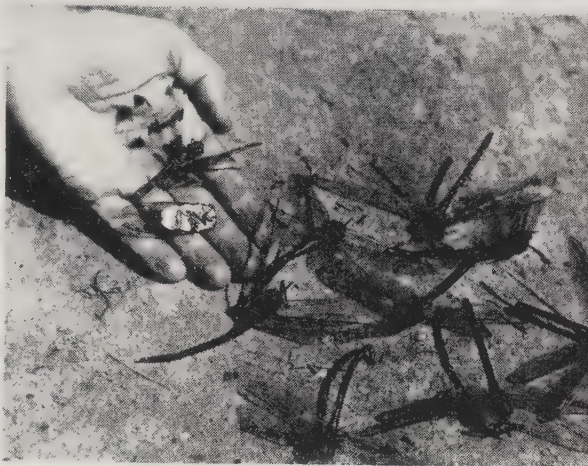


Upper left — One of the two J. Warren Jacobs purple martin houses in the Cleaves' yard on Purdy Street, Prince's Bay, Staten Island, September 10, 1916. Here the first breeding record for the island occurred in 1917.

Upper right — Of the four purple martins shown atop this 12-room house in the Cleaves' yard in Prince's Bay, on August 5, 1917, two were parents of the first young known to have been reared on the island; the other two were "kibitzers."

Lower left — This young purple martin, wearing an aluminum ring bearing inscription of the American Bird Banding Association, and held in the hand of Mr. Cleaves' mother (August 2, 1917), was one of either two or three young — the first of record for the island.

Lower right — The martin houses, June 16, 1918, after removal from the Cleaves' place in Prince's Bay and relocation at Huguenot Park, Staten Island. A single martin is shown on one house. The birds failed to accept the houses in the new location.



Upper left — Howard Cleaves holding a young purple martin that tried to fly prematurely and had to be replaced in the nest box by means of an extension ladder.

Upper right — The author inspects the Sears-Roebuck martin house on the Cuthbert clothes pole at Lemon Creek, Prince's Bay. Two pairs of martins nested in this house in 1951, but neither pair succeeded in rearing young. See text.

Lower left — Cleaves contemplates with satisfaction the view along martin row on August 9, 1955. The three houses contain a total of 50 rooms. Four additional houses for purple martins are under construction, to be ready for 1956.

Lower right — Dragon flies and cicada — too big for nestlings to swallow. These and others like them fell to the ground beneath the martin houses when parent birds tried unsuccessfully to ram the over-sized morsel down the throats of their offspring.

I carried on a clip board. When birds went in and out of a room, especially when they carried in nesting material, I marked that room "occupied" on the chart. However, a few of these pairs evidently changed their minds later, or were forced by domineering individuals in neighboring cubicles to abandon the rooms they had selected. The final tally for the 1955 season, based on a count of rooms in which young were fed (in most cases the young were seen thrusting their heads out of the doorway to receive food from adults) stands at twenty-one breeding pairs — thirteen in No. 1 house, and eight pairs in No. 2 house.

On the basis of an average of three young per pair, the total "get" for the season 1955 would be sixty-three young purple martins. But against this total must be placed the known mortality figure for the season and this, sadly, is not small. Whether the loss of young birds is attributable to the abnormally hot summer (more than twenty days with a temperature above 90° F.), or for some other reason, cannot be determined; but between July 8 and August 8 sixteen young martins were found on the ground, eleven of them dead. The dead birds were all in the pin feather stage, some beginning to feather out, but none anywhere near able to fly. The other five young discovered on the ground were well feathered, but able to fly only short distances. By use of a ladder, three of the five were replaced in the houses, but it could not be determined whether they were restored to the proper rooms. In each case the fallen youngster was put into a room with another nestling of about the same age; and in one instance, at least, an adult was seen to feed both. A minimum of thirteen dead young (approximately 20%) must therefore be subtracted from the assumed total of sixty-three young hatched, resulting in a net accretion of fifty young purple martins.

In both 1954 and 1955 it was noticed that the adults began bringing in larger insects as the young grew, until the size was beyond the capacity of the young birds to accept. These insects consisted of two species of dragon flies and a cicada or harvest fly. I watched a male martin try six times before succeeding in cramming a big dragon fly down the throat of one youngster and making it stick. The parent bird came in up-wind for a landing on the ledge in front of the nest chamber, the young bird extending its neck and wide-open mouth far out to receive the morsel. After several quick thrusts which failed to force the large body and wide-spread wings of the dragon fly down the young-

ster's throat, the old bird flew off, circling over Lemon Creek, and then made an entirely new approach. This maneuver was repeated five times. The sixth attempt succeeded. I gathered about a dozen dragon flies and two cicadas that had fallen to the ground beneath the martin houses — all wasted items that young mouths, although big, were not large enough to receive. In almost every case the parent martin had taken the precaution to crush or remove the dragon fly's head and powerful mandibles which, if left intact, might result in injury or death to the nestling martin.

As of 1955 it can be announced that Staten Island has a seemingly firmly established colony of purple martins consisting of almost two dozen breeding pairs, with the prospect that an estimated eight pairs may add themselves to this core in 1956. Birdwise this is an event of twofold importance. A distinguished species is added to the breeding birds of the island, and this Staten Island colony is the only one within the entire city of New York. Birders from far and near have journeyed to Lemon Creek for a glimpse of the birds. Artists haunting the Lemon Creek area have included one or another of the martin houses in their paintings. Local boatmen and week-end fishermen slant an eye up at the bird houses on the tall poles as the martins flash in and out — a frequent question being, "What are they?" Margaret Cuthbert is kept busy passing out martin information along with bait and tackle. Bridge operator Schultheis and his friend Ernest Kroemer have become so enthusiastic that they have volunteered to build three more martin houses in their off-time, from materials supplied by the writer.

The project is now under way. With reserve houses prepared in advance, expansion can be accommodated without delay; or a second colony of martins might even be attempted at some other "psychologically suitable" location on the island — Great Kills, for instance.

... All of which, I say, is reward enough for one in whose head germinated the idea — thirty-nine years ago — that it would be nice to have purple martins on Staten Island.



SCIENCE NOTES

ROBERT F. MATHEWSON

The untiring efforts of our bird watchers slowly but surely provide data which, in the aggregate, present the total picture of our Staten Island breeding bird populations. The observers, through the breeding season of 1955, have been Howard H. Cleaves, Robert F. Mathewson, Ruth Nauss, Casimir Redjives, and Mathilde Weingartner.

The following specimens were noted:

Green Heron	House Wren
Mallard Duck	Long-billed Marsh Wren
Black Duck	Catbird
Wood Duck	Brown Thrasher
Sparrow Hawk	Robin
Ring-necked Pheasant	Wood Thrush
King Rail ¹	Veery
Killdeer	Bluebird
Woodcock	Starling
Spotted Sandpiper	White-eyed Vireo
Mourning Dove	Red-eyed Vireo
Yellow-billed Cuckoo	Yellow Warbler
Black-billed Cuckoo	Chestnut-sided Warbler
Barn Owl	Prairie Warbler
Screech Owl	Northern Yellowthroat
Whippoorwill	Yellow-breasted Chat
Chimney Swift	English Sparrow
Ruby-throated Hummingbird	Eastern Meadowlark
Belted Kingfisher	Red-winged Blackbird
Flicker	Orchard Oriole ²
Downy Woodpecker	Baltimore Oriole
Eastern Kingbird	Purple Grackle
Crested Flycatcher	Cowbird
Alder Flycatcher	Cardinal
Wood Pewee	Indigo Bunting
Prairie Horned Lark	Goldfinch
Tree Swallow	Red-eyed Towhee
Rough-winged Swallow	Sharp-tailed Sparrow
Barn Swallow	Chipping Sparrow
Purple Martin	Field Sparrow
Blue Jay	Swamp Sparrow
Crow	Song Sparrow
Black-capped Chickadee	

¹ Howard Cleaves notes: "The presence of this bird at this date (May 24) suggests the possibility it may have been nesting in some small cattail stand in the vicinity. The nests of this species have been found only a few times in the New York City region — never on Staten Island."

² Quite rare on Staten Island, a pair of these birds were observed by Robert Mathewson in May, 1955.

Several new, rare, and interesting items of natural history have been added to our records for Staten Island during the past year.³

An empty shell of *Otala lactea*, a land snail, was found at Ward's Point on April 9, 1955. This snail is native to northern Africa and southern Europe. Unsuccessful attempts have been made to establish it in the New York area for food purposes. The empty shell, picked up by Mathilde Weingartner on the beach, was covered with tar and may have been discarded as garbage.

Epitonium rupicalium, a small marine gastropod, was also found at Ward's Point by Miss Weingartner in July, 1955. This staircase shell was not found on Staten Island for many years and may be an indication that the waters of Lower New York Bay may not be as badly polluted as they have been in former years.

Another marine gastropod, *Urosalpinx cinereus* var. *aitkini* was also reported from Ward's Point by Morris K. Jacobson. The usual color of this oyster drill is dark brown or dark gray. The variety *aitkini* is pure white and has not been previously found on Staten Island. It has been reported, however, from an area near Hempstead, Long Island.

Gibbium psylliodes, a dark shining brown beetle, less than one-eighth inch in length and extremely rare north of Virginia, was collected by I. C. G. Cooper in August, 1955, in a West Brighton house where it was reported to have bitten a sleeping child. William T. Davis found it in the New York Produce Exchange in 1907, and Dr. J. Beguaert in a mouse's nest in an old log on Long Island in 1918.

Two avocets were seen at the Travis Edison Plant by Lee A. Ellison immediately after hurricane Connie in September.

A specimen of *Taxodium distichum* (bald cypress) was found in September, 1955, by Amelie Elkind. Only three other living specimens are recorded for Staten Island. These trees are probably survivals from the time when owners of large estates imported interesting trees from other states and abroad. Bald cypress occurs naturally on the coastal plain south of Delaware.

A stand of *Hudsonia tomentosa*, a beach heather, was found by Miss Weingartner in May, 1955, near the tip of the

³ Complete information can be obtained from the Institute records in the custody of the Curator of Science.

beach at Great Kills Park. This plant has not been reported for many years anywhere on the Island and has always been very rare here. There are a number of patches scattered among the sand dunes of the park and, when in bloom in late May or early June, they give a lovely yellow appearance.

BOOK REVIEWS

How to Know the Minerals and Rocks. By Richard M. Pearl. (McGraw-Hill Book Co., 1955. \$3.50.)

Have you ever picked up colored pebbles on the beach, or idly looked at the rocks along a Connecticut stream bed, noting the garnets; or wondered, perhaps, what *are* these rocks you hold in your hand? If you have, you will find that Richard M. Pearl answers such questions in *How to Know the Minerals and Rocks*, and gives an uncomplicated presentation of similar information on a difficult subject.

At the start, Mr. Pearl points out that mineral collecting can be a fascinating avocation of year-round interest—collecting in the summer; classifying, cutting, polishing and trading during the winter; and, most important, making new friends at all seasons. Chapter II includes an interesting discussion about soils and scenery which I believe should be expanded — for “automobile geology” can make any ride more pleasurable.

Chapter III deals with building a mineral collection, and also briefly (more briefly than we could wish) with the art of growing crystals — which affords a most interesting phenomenon, especially if viewed microscopically. The miniature hurricane of ionic activity can be observed clearly under a low-power microscope or glass, and aids in the appreciation of the formation of crystalline structure.

The seven keys for mineral identification are aptly chosen, as six of them are field identifications where key number seven is approximated in the field and confirmed easily at home.

Radioactivity, exemplified by fluorescence, phosphorescence, luminescence and radiation counting could better be described in view of the current interest in radioactive materials,

and especially as it is not necessary to find an "A-bomb" mine in order to collect radioactive minerals, particularly among the older rocks. Staten Island beach sands, too, yield radioactive minerals, some of which still remain unidentified.

The study of inorganic materials from the amateur standpoint has been greatly neglected in the past, the "bird watchers" greatly outnumbering the "rock hounds." Recent interest in the collecting and subsequent study of these easily available materials has been greatly stimulated by the growth of atomic science with its fabulous wealth of untapped knowledge.

Our neighboring counties afford the neophyte collector with adequate materials for his collection. Many a pleasant day may be spent gathering the splendid specimens at the prolific quarries of Bedford, New York, and at the phenomenal mines of Franklin, New Jersey — both within sixty miles of Staten Island.

How to Know the Minerals and Rocks can well be recommended as a practical, concise, and easily read text for those who have never "looked at stones."

CARLETON A. SIEMER

The Octopus. By Olive L. Earle*, illustrated by the Author. (William Morrow and Company, New York, 1955. \$2.00.)

How does an octopus squirt his inky fluid? How does he dart forward, using the jet principle? What does he eat? As we all know, young people are interested in creatures of nature — and they want straight information. Here is a book, richly illustrated, which tells the facts not only about the octopus but also about many of his relatives in the cephalod family. (You might ask your young son about that word!)

Miss Earle writes with clarity and enthusiasm. She is well known as a naturalist. She is well known also as a very fine artist, which is why she turns out books quite different from other nature books. *The Octopus*, set apart in Miss Earle's own category, has a special quality.

This special characteristic of *The Octopus* makes it akin to the modern comics (in their only good aspect) and to the mediæval manuscripts. Each page appeals to the eye as well as to the mind. The illustrations are so knit to the sense of the writing

* Staten Island resident.

that they cannot be considered separately. As you read the sentence about mollusks, you can feast your eyes on accurate drawings of the oyster, the snail, and the mussel: not diagrammed like a textbook, not changed or distorted, but presented as they truly are — beautiful in design.

The illustrations, unlike those of many children's books, say precisely what the author has in mind, emphasizing the meaning of the text. But they do much more. They add more facts. They point out the beauty in every object shown. They lead the reader to reflection and to new experiences and to private adventure. Pages 34 and 35, for example, present a complete scene with a small block of printing superimposed. The text describes the octopus' method of eating a cray fish. The words say simply, "With his body humped over his meal, his powerful jaws go to work," but the picture takes one into the enchanted world under the sea: to the swaying grasses, the corals; the small, darting fish, and, in the center dominating the scene, to the octopus himself, both grotesque and beautiful.

Although the hero, the octopus, is never treated at any time with even a trace of sentimentality or given any character but his own, in the pictures he does appear in his most appealing aspect. He looks, for instance, inquisitive as he peers out of his house in an old wreck, comfortable as he rests at home, apprehensive as he backs away from the fiercest, biggest-mouthed fish we ever sat on the bottom of the sea with. And on the last page he seems to be waving good-bye to the accompaniment of the single sentence,

"Strange are the sea animals with arms around the head!"

Offhand I cannot think of anyone who would not like to pore over this book page by page many and many a time.

ELIZABETH CONGER

Shrubs and Trees for the Small Place. By Peter J. Van Melle. Revised 1955. Edited by Montague Free. (The American Garden Guild and Doubleday & Co., Inc., Garden City, N. Y. \$3.00.)

With the vast amount of home building now going on in Staten Island, there comes a need for authoritative information on the subject of selecting proper woody plants to make homes of houses. Copying the shrub and tree plantings of yesteryear will

not do. High wooden structures with unsightly foundations, and large verandas with pleasing distant views, have given way to the low ranch or similar types of homes. The style trend in trees and shrubs is definitely toward those that remain small to moderate in size.

The problem now is to keep the planting in scale with the house and plot. In this new revision of a standard textbook on the subject, Mr. Van Melle gives us the advantage of many years of practical experience as a nurseryman and as a landscaper, particularly of small homes. His ability to describe accurately and teach properly was demonstrated over a period of years as an instructor at the New York Botanical Garden.

In brief, the volume is a careful evaluation of the readily available deciduous shrubs and small trees. It starts with some very useful tables for special purposes. Then comes a review of the smaller shrubs that are usually planted in borders or in large groups, followed by a section devoted to score charts, in which the shrubs are rated according to their good points and their faults, enabling one to determine whether a variety will meet specific needs.

Following this is a section devoted to the specimen type of tall shrub and to the smaller shade trees. At the end of the book are practical pointers to help the uninformed avoid the mistakes so common among new home owners who try to follow the "do-it-yourself" vogue.

The author's home being in Poughkeepsie, New York, the ratings are for climatic conditions similar to or colder than those of Staten Island. All in all, this reviewer's impression is that Mr. Melle's book fills a real need for a large number of Staten Islanders.

EDWIN RUNDLETT

Streams, Lakes, Ponds. By Robert E. Coker. (Chapel Hill, University of North Carolina Press, 1954. \$6.00.)

Rarely does one find that an author accomplishes his objective so completely as Coker has done in the book under review.

Dr. Robert E. Coker is Kenan Professor of Zoology at the University of North Carolina. His writings on various phases of life in water extend back through the past forty years. Now he has drawn upon his extensive experience and collected wisdom to produce an impressive overall story of inland waters.

Following a brief introduction on the place of water in the history of a land and its people, the behavior of water in its contacts with air and soil under all ranges of normal temperature changes is closely considered. The essential place of water in all life processes and its function as a carrier of all the nutrition requirements of life existing within it are clearly brought to the reader's attention. The many factors such as the sun, surrounding country soil, vegetation and fauna, the resulting turbidity, color, odor and taste are carefully analyzed for their effects upon living forms dependent on the content of the precious fluid in which they are continually bathed. The cycle of emergence, production and decay is all described.

Systematically the author carries his reader through consideration of the various types and conditions of open water, such as the upland brook, small and large streams and rivers in varied surroundings, and the many forms of lakes. The reader is impressed with the subtle interplay of the factors which govern the life within these differing bodies of water and the wide spread in the conditions arising from changing external and internal causes. The subject of pollution is dealt with in a careful way. The author believes that knowledge of the full effects of pollution will help populations to set up effective controls. The tragic effects of man-made pollution are laid bare.

In the chapters covering the ecology of lakes are brief descriptions of the plants, lower animals, and vertebrates which make up the populations of the waters, but the text is not a manual on these topics.

The author's studies finally lead to a description of the conditions necessary for successful use of ponds as a source of food production through the raising of edible fish.

The book is illustrated with a number of diagrams and two reproductions of water scenes.

The author has drawn upon literature ranging over eighty years, and has cited his references in fifteen pages of bibliography. He has presented data that should satisfy an exacting student, and at the same time has given the general reader a story as readable as it is fascinating.

I. C. G. COOPER

The Strange World of Nature. By Bernard Gooch. (Thomas Y. Crowell Company, New York; 1955; \$3.00.)

This is a delightfully written book on animal behavior, based on personal observations intelligently interpreted. It is the outgrowth of grueling but happy vigils spent in observing animals in order to learn *why* they behave as they do.

The author comes up with many unusual findings that run contrary to popular opinion, such as the familiar one of a bird supposedly showing intelligence when it feigns a broken wing to lure an intruder away from the nest. When he tells of personal experiences with sea anemones, frogs and toads, snails, marsh tits, limpets and sea birds, we get a rounded out picture of animal behavior in general that helps in interpreting actions of other animals and we are already planning excursions into our own back yard to try them out.

The book is divided into three parts, dealing with the animals themselves, their approach to life, and the difficulties of interpreting their behavior in the light of their own actions and not by those of humans. The animal poses in the many captivating woodcuts by Joan Hassall enhance the author's delightful style.

R. N. NAUSS

God's Family. By E. M. Conger*. (Seabury Press, Greenwich, Conn., 1955. \$3.00.)

Most of us know Mrs. Conger ("Blit" to her friends and the Museum staff) as the peripatetic Curator of Education for the Museum, but few of us know her in some of her other amazing roles. As a teacher of remedial reading, she was the author of several texts on the subject, and now she has authored the fourth grade text, *God's Family*, for use throughout the Episcopal Church in its new curriculum.

The author, who says of herself, "I always reduce everything to a fourth grade level," has brought forth a deceptively simple work that might well be read by the adult members of any congregation who, when it comes to religious ideology, usually function somewhere below the kindergarten. In its first section an H. G. Wellsian trip for Jeremy Brown, through the television

* Staten Island resident.

set to the first century it is pleasant to find the Romans behaving as well-mannered citizens of East Orange might behave. There is a difference. Beyond the manners, these people are Christian, and one tastes the zeal and the enthusiasm of the first century which is almost completely absent from the willy-nilly religious search in our age. The second part is an admirable summary of one of the major patterns of thought in the Old and New Testament, that of God's particular family. Family relationships are of the prime importance to the fourth grader and this book well meets his needs.

Beyond its use as an adult introduction to the liveliest period of Church History, and some of the greatest thought of the Bible, this book is a must as a birthday, Christmas or Anniversary of Baptism gift from Godparents of any church to their siblings in Christ. It is attractively illustrated and bound in hard covers.

DONALD S. CHEETHAM

The Emerald Crown. By Theodora McCormick*. (Funk & Wagnalls Company, 1955. \$3.75.)

Ireland is the scene and the years just before and after 900 A. D. the time of this historical novel. The author tells us that "the principal men, women, and small boys in this book are real, as are very many of the happenings." She lists a number of sources, some of them quite ancient, and has clearly made a careful study of the records and has visited the places she describes. At times one feels the weight of her erudition. But she is blessed also with a vivid imagination, which enables her to fill the gaps in the record quite plausibly and to breathe life into the bones of the past.

There are occasional lapses, when we are conscious of a twentieth-century viewpoint: the heroine rejoicing that she can wear riding-breeches becomingly because she has been subjected to a reducing diet and plenty of exercise; the traffic congestion as one approaches the fair at Taillten. But on the whole the spell holds us, and we are in an alien world — a world in which the learning and piety of Cormac, the order and the cleanliness of Cashel, contrast with the darkest superstition, violence, and anarchy. There are passages which remind us of the Achaean world of

* Staten Island resident.

Homer, but without the nobility of language and sense of world-shaking drama which made the Iliad immortal. Miss McCormick's language is often eloquent, but it wavers between modern American and a somewhat synthetic archaism. The present reviewer was baffled by the use of a few unexplained terms, presumably Gaelic — ollave, pinginn, screpall.

These are minor defects. The book is well devised to give us the pleasure that comes from escape to an earlier and simpler society, not lacking in nobility, though marred by occasional savagery.

The novel, of course, has a heroine and a love story; and although Sionna is thrice married, and experiences more woes than Cunegonde before attaining a happy ending, she does not belong to the race of Amber or of Scarlett O'Hara. She is steadfast in her love for her hero, but true to her marriage vows to the respectable but elderly and other-worldly Cormac, her first husband, and even to the savage Carroll, who forces her to marry him after he has slain Cormac. However, she does not endure these trials without inner conflict. Indeed, she is a real and admirable person and withal a woman of her time and place. The lesser characters, and even Sionna's lover Niall, are sketched rather than fully developed, but not unskillfully drawn.

Not a great novel, but competently written and pleasant to read.

JOHN R. BACHER

A Bibliography of References to Diseases of Wild Mammals and Birds. By Patricia O'Connor Halloran.* (American Veterinary Medical Association, 1955. \$10.00.)

More than ten years' work has gone into the preparation of this 465-page book, involving the translating and cross-indexing of over 8,000 references from more than 900 different publications throughout the world. This compilation of the existing knowledge concerning disease in wild animals has been undertaken by Dr. Patricia O'Connor Halloran, staff veterinarian of the Staten Island Zoological Society, in an attempt to provide an orderly index to illustrate the incidence and character of disease patterns that occur among the various wild species. It is believed to be the only work of its type available. — Ed.

* Staten Island resident.

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PRINTED ON STATEN ISLAND BY
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Proceedings

of the

STATEN ISLAND

INSTITUTE OF ARTS

AND SCIENCES

Volume XVIII

Spring 1956

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Volume XVIII

Spring 1956

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MAGNETIC SURVEY OF THE STATEN ISLAND SERPENTINITE

By
GILBERT WASSERMAN

This paper is the second of two which the PROCEEDINGS has recently published on the local serpentinite. The first, written by Juan J. Behm on the petrology of the serpentinite, appeared in the Spring issue of 1954 (Vol. XVI, No. 1).

Unlike Mr. Behm in his method of approach, Mr. Wasserman has evaluated the magnetic intensities occurring in the mass. Mr. Behm's and Mr. Wasserman's reports show interesting parallels and carry research a degree further towards the eventual understanding of the genesis, extent, and shape of the serpentinite.

This Institute is happy to afford young scientists an opportunity to present their findings, and also to keep interested students advised of this research. — Ed.

INTRODUCTION

THIS PAPER is a report of a magnetic survey undertaken over the Staten Island serpentinite, together with some suggestions of structure indicated thereby. The survey was made with a Ruska Scout Magnetometer which when properly set up over a point will measure the vertical component of magnetic intensity at that point. After 302 stations were measured, the data were compiled and plotted on a map of the serpentinite. Contours of vertical magnetic intensity were then drawn. For further analysis, profiles of magnetic intensity were plotted at intervals at right angles to the strike of the serpentinite. For complete qualitative evaluation of the data, the structural, petrologic, and physiographic facts of the area were taken into consideration in their respective importance. Although a unique solution was pursued, it must be admitted that, as in many magnetic surveys, it was not found. Within the scope of the known geologic facts, some structural conclusions were suggested.

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MAGNETIC SURVEY OF THE STATEN ISLAND SERPENTINITE

By
GILBERT WASSERMAN

This paper is the second of two which the PROCEEDINGS has recently published on the local serpentinite. The first, written by Juan J. Behm on the petrology of the serpentinite, appeared in the Spring issue of 1954 (Vol. XVI, No. 1).

Unlike Mr. Behm in his method of approach, Mr. Wasserman has evaluated the magnetic intensities occurring in the mass. Mr. Behm's and Mr. Wasserman's reports show interesting parallels and carry research a degree further towards the eventual understanding of the genesis, extent, and shape of the serpentinite.

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INTRODUCTION

THIS PAPER is a report of a magnetic survey undertaken over the Staten Island serpentinite, together with some suggestions of structure indicated thereby. The survey was made with a Ruska Scout Magnetometer which when properly set up over a point will measure the vertical component of magnetic intensity at that point. After 302 stations were measured, the data were compiled and plotted on a map of the serpentinite. Contours of vertical magnetic intensity were then drawn. For further analysis, profiles of magnetic intensity were plotted at intervals at right angles to the strike of the serpentinite. For complete qualitative evaluation of the data, the structural, petrologic, and physiographic facts of the area were taken into consideration in their respective importance. Although a unique solution was pursued, it must be admitted that, as in many magnetic surveys, it was not found. Within the scope of the known geologic facts, some structural conclusions were suggested.

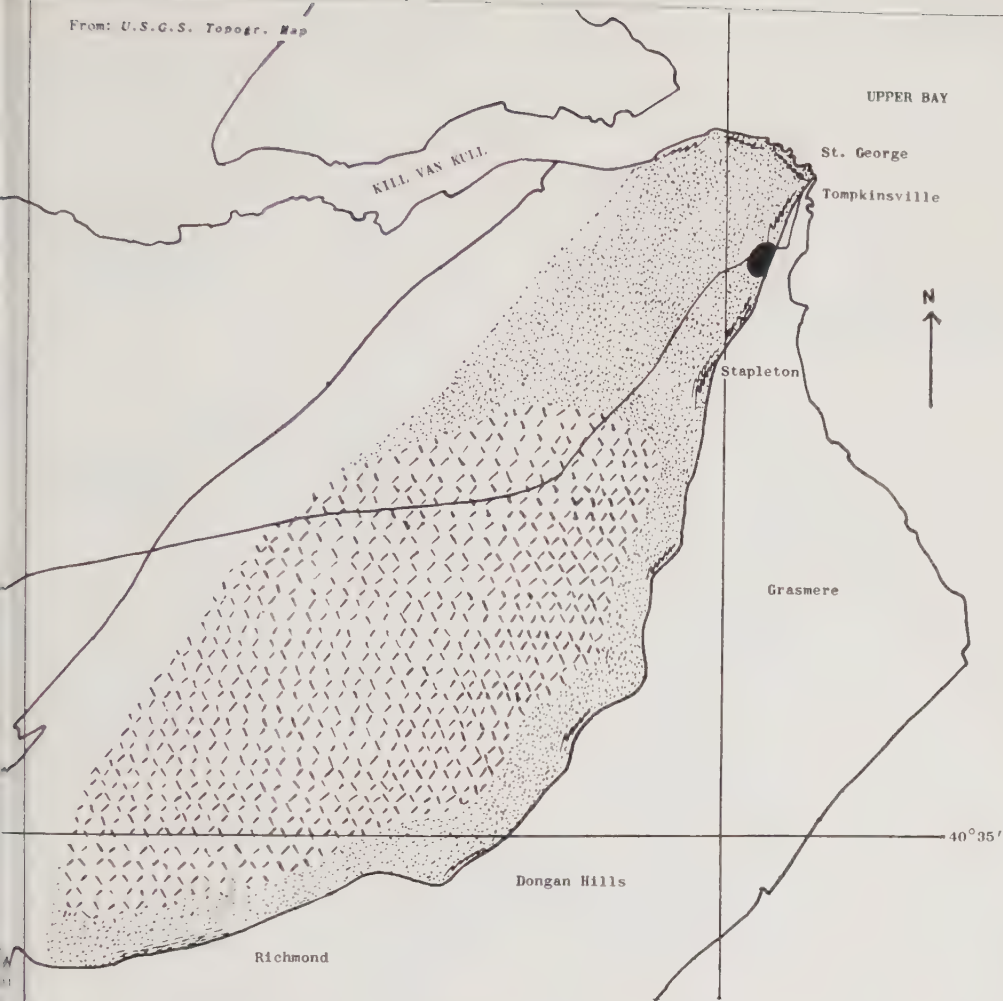
GEOLOGY

The serpentinite is the major relief feature of Staten Island. It exists in a long oval form that conforms to the area-wide strike of the rocks of the metropolitan area—namely northeast by southwest. It is three miles wide and about eight miles long. It rises to a height of 413 feet at its highest point—on Todt Hill. It presents a wide variety of facies, from fibrous-weathered to black dunitic.

Geologically it is bound on the west by an abutting basin of the Triassic Newark series sandstones and diabase which dip off to the west at an angle of about ten degrees ($\pm$). On the east and south an apron of unconsolidated sediments, consisting of recent and cretaceous beds, dip off to the sea in the typical low Coastal Plain dip. Beneath these strata is bedrock—the exact composition and aspect of which are concealed beneath the overburden.

Physiographically, the serpentinite should probably be assigned to the New England upland province because of its habitual inclusion amidst the schists and gneisses as in the immediate vicinity of the metropolitan area. (There is one outcrop at Hoboken, another in Manhattan near the southwestern tip of Central Park, and still another at Davenport Neck, Long Island. There is also an occurrence reported from the drillings of the Pennsylvania Railroad tunnels under the Hudson River.) The Newark series are considered in the Piedmont province along with the rest of the Triassic beds found in the area. The recent and cretaceous sediments east of the serpentinite belong in the Coastal Plain province. A study of profiles of elevation across the strike of the serpentinite indicates definite crowding of contours on the east and a more widespread step-like effect on the west. This is typical of the cuesta type outcrop facing the east. The conformity of this slope to the west with the dip of the Triassic beds should be given some consideration.

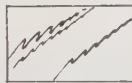
The petrology of the serpentinite has recently been treated in a thorough manner by Mr. Juan J. Behm in the Spring 1954 issue of the *Proceedings of the Staten Island Institute of Arts and Sciences*, in his paper, "The Petrology of the Serpentinite of Richmond County." The facies map evolved by Mr. Behm together with his petrographic and chemical analyses is considered major control data for the interpretation of the magnetic profiles. The



Variation in texture in Staten Island serpentinite



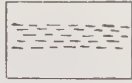
Massive, "porphyritic"
serpentinitized peridotite
(central serpentinite)



Anthophyllite-and talc
schist, and foliated
serpentinite



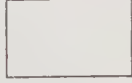
Massive, talcose serpent-
initized peridotite



Lineation produced by
alignment of altered
orthopyroxene crystals
at Old Mill Road



Dunite, slightly
serpentinitized



Undetermined

1 mile

74°05'

PROFILES OF VERTICAL MAGNETIC INTENSITY and ELEVATION



MILES



PLEISTOCENE



BASALT



CRETACEOUS



NEWARK SAND STONE



SERPENTINE

ELEVATION

600
400
200
0
A

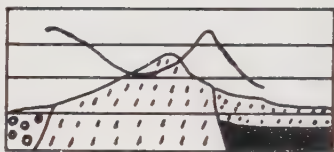


GAM

1500
1000
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ELEVATION

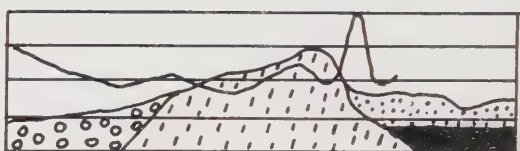
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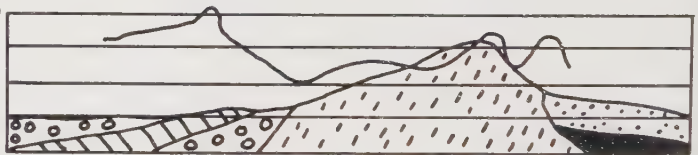
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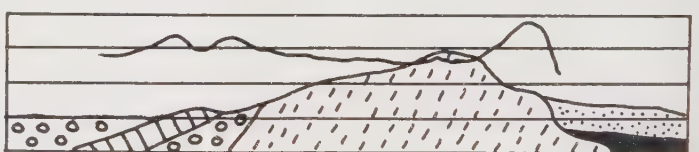
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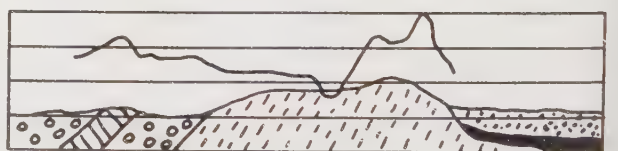
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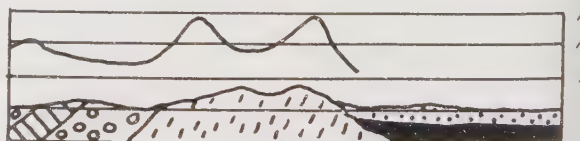
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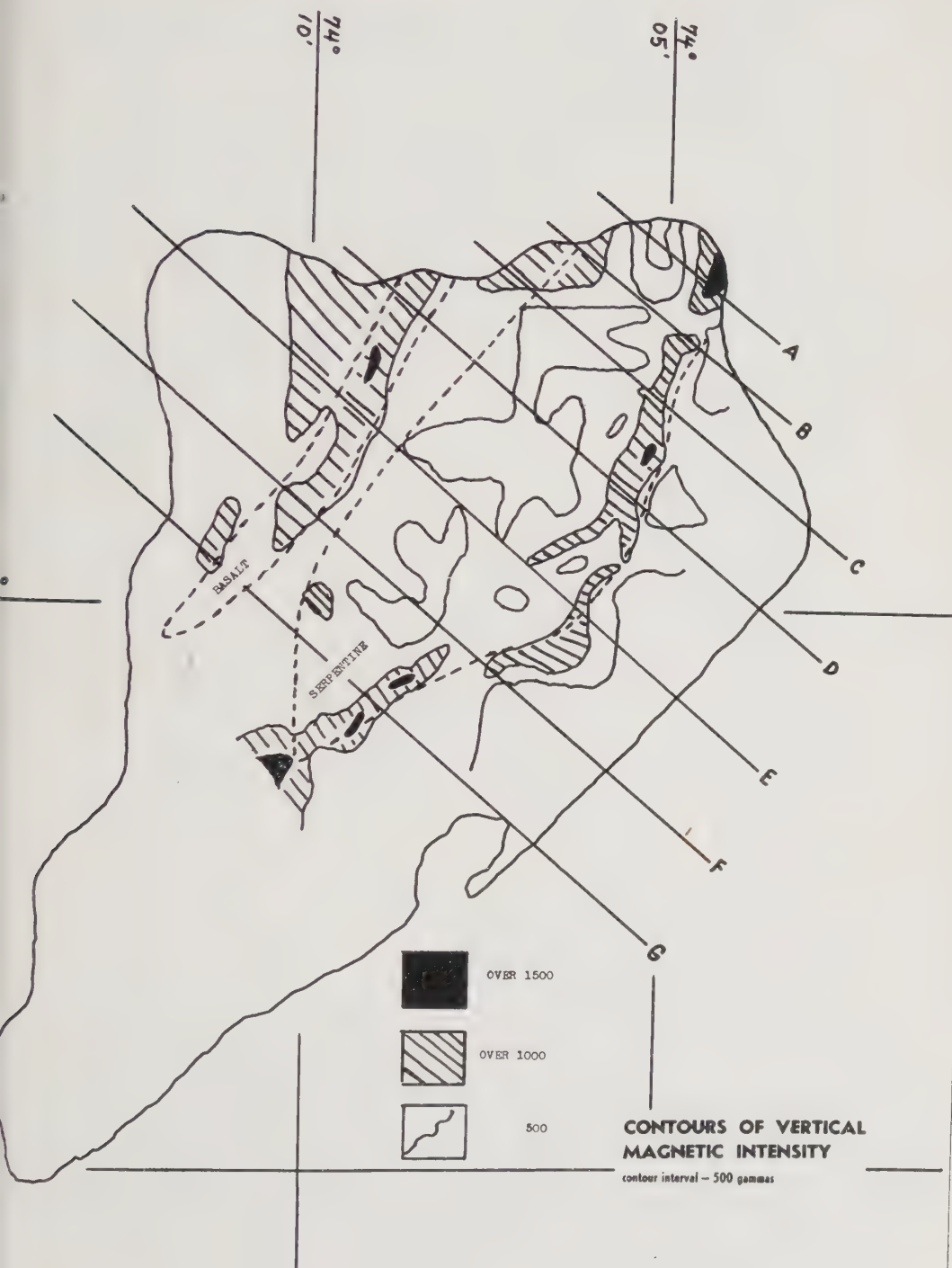
ELEVATION

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G



1500
1000
500
0

MILES



area of highs of magnetic intensity, as a matter of fact, shows an interesting correspondence with the facies evident in a comparison of the two maps, Plates 1 and 2B.

Well-log data in the area of the serpentine are also of great importance in structural deductions. A summary of the most available well data is contained in Bulletin GW 32 of the New York State Water Power and Control Commission written by N. M. Perlmutter and T. Arrow, both of the United States Geological Survey. It shows a southeast profile (Plate 3, Fig. 1). The structural section shows no great disconformity, fault or discontinuity under the eastern edge of the serpentine as would be suggested by the comparatively large anomaly shown in the magnetic survey. This disparity will be discussed later.

Another control datum is the location of bedrock beneath the unconsolidated recent and cretaceous cover on the eastern flank of the serpentine. This appears to have been fairly well established by well data on both the Island and in related areas of Brooklyn and Queens. From available data, the slope of the bedrock off the east can be indicated. However, it should be remembered that the composition of this bedrock floor is not completely understood. Perlmutter and Arrow label it Pre-Cambrian Serpentine, yet there is evidence that it may be a schist-gneiss floor continuous with that beneath Long Island (Plate 3, Fig. 1).

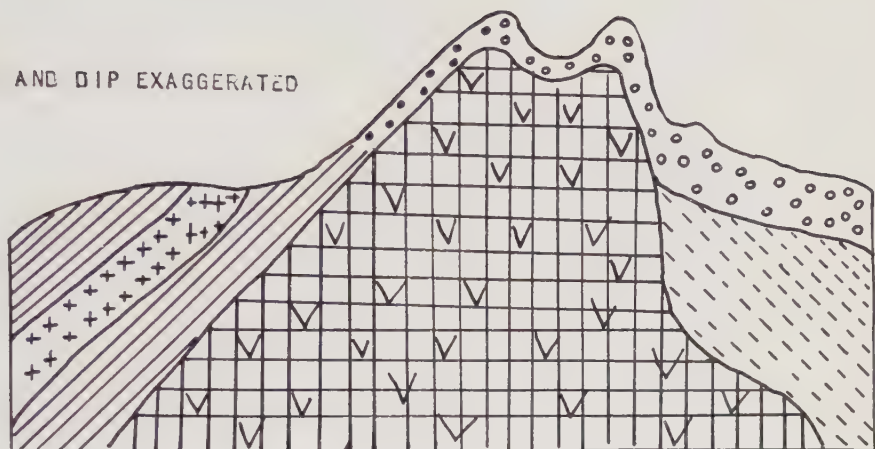
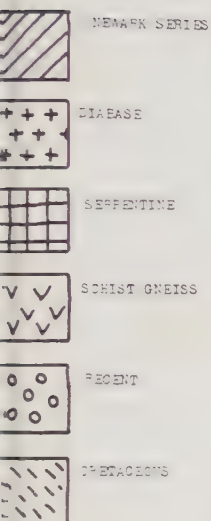
No definitive contact between the serpentine and the Triassic basin to the west is on record in well-log data or in outcrop. On the basis of field correlation it appears to the author that the serpentine slips under the Triassic and forms its bedrock floor.

II

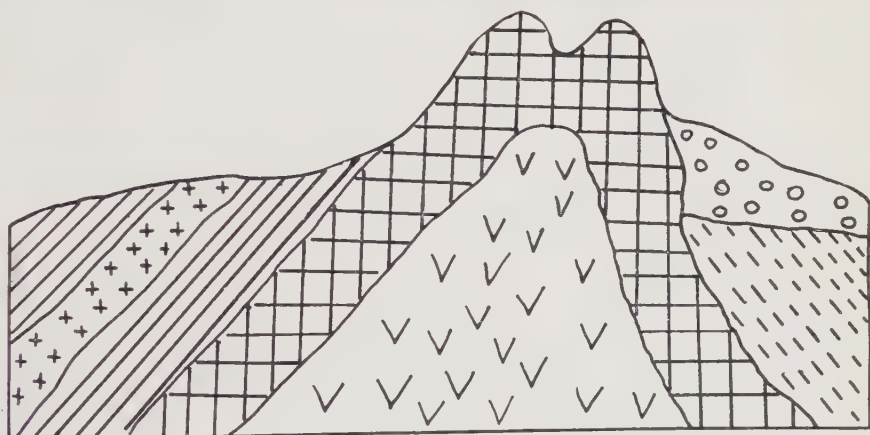
MAGNETIC SURVEY

The instrument used was the Ruska Scout Magnetometer, Type V, Model No. 8501, with Alidade attachment. Fundamentally the instrument measures vertical magnetic intensity over a particular point. This is accomplished by having a set of two thin bars of magnetized steel balanced perfectly on a knife edge which rests on a quartz cylinder. By a system of counterweights and a method of orientation athwart the direction of the earth's field, the instrument reads in two arbitrary units, that vertical component of magnetic intensity which is left after the effect of the earth's

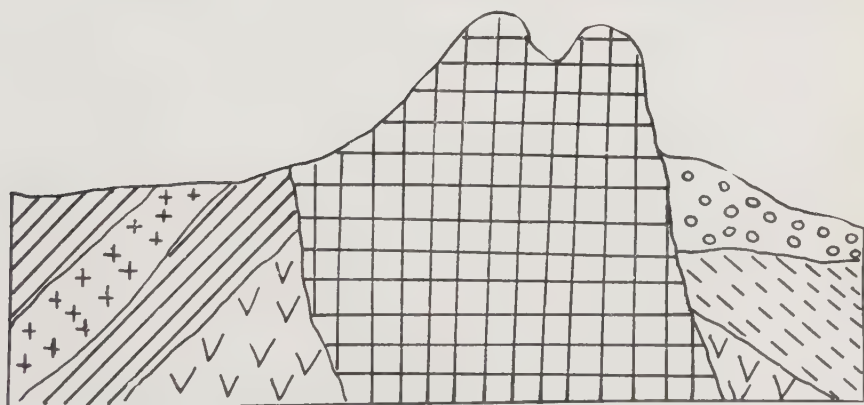
VERTICAL SCALE AND DIP EXAGGERATED



SECTION AFTER PERLMUTTER AND ARROW



SECTION AFTER BRITTON (1881)



SECTION AFTER CROSBY (1914)

field is removed—or, as it is called, the “anomaly.” By means of a Helmholtz coil which is part of the equipment, the arbitrary units are calibrated to read gammas or 1.000×10^{-5} electromagnetic centigrade grams system units.

PROCEDURE AT STATION •

Tripod is set up over selected point, with leg of tripod with black dot roughly oriented towards north. (This adds no additional residual magnetic anomalies due to tripod.) Compass is then set up on tripod platform fitting into three machined holes, after first leveling tripod circular bubble for horizontal. Entire platform is then turned so that north-seeking end of needle points to 270 degrees. This orients the platform so that when the magnetometer is placed on it the orientation of its magnetic axis is in an east-west direction, thus eliminating all torque on the system by the horizontal component of the earth's field. The platform thus oriented is locked and is now ready to receive the magnetometer after the compass is removed.

The magnetometer is now placed in the same machined holes on the platform and is ready for leveling after three spring clamps at its base are in place. The magnetometer is rotated to each end of its 180° swing and leveled, using two long bubbles at right angles to each other. After the plane of rotation is leveled, the instrument is turned to either limit of its rotation where it will be oriented at right angles to the magnetic meridian and will be measuring the vertical component of the earth's field. (A factory adjustment of counterweights for this latitude and longitude further eliminates the vertical component of the earth's field, leaving only anomaly readings to be recorded.) An actual reading is accomplished by lowering, by means of a lever, the sapphire knife edge on to a cylindrical quartz bearing. One reading is made with the north end of the bars to the east; the other, to the west—these settings being made automatically by rotating the magnetometer 180 degrees until it comes to rest. The two readings are averaged and become the mean reading of that station. The reading is in arbitrary units and is reduced to gammas by previous determination of a constant of conversion. This constant is periodically calibrated with a Helmholtz coil and milliammeter.

Certain elementary precautions are necessary in the immediate vicinity of the instrument so that the operator does not become the

inducer of stray magnetic forces. He must be divested of metallic objects and remember to maintain a four-yard distance at all times between the calibrating magnets and the operating magnetometer.

COVERAGE •

A total of 302 stations is indicated in this survey. Some stations were taken over the diabase to the west of the serpentinite. This effort was rewarding to a limited degree, showing well defined highs over the area of diabase. In the total area of the survey, the average distance between stations was about 2600 feet. There was an initial concentration of 1000 feet between stations at the northern section of the serpentinite, but this was abandoned in favor of profiles across the strike. The unmeasured area between these profiles was later filled in to bring it to a 2600-foot average concentration. The area of coverage is enough to bring out any significant anomalies (Plate 2A).

STATIONS •

In selecting stations, priority was given according to the following considerations:

- (a) *Accessibility*;
- (b) *Spacing*: Much use was made of empty lots near the area of a contemplated station;
- (c) *Freedom from disturbance*: Avoidance of water mains, autos, power lines, electric railroads, houses, pipe lines, etc. An offset from the street was made consistent with an equal offset from houses and other possible disturbances. The southern extent of the serpentinite presented the least number of disturbing influences, being less "built-up."

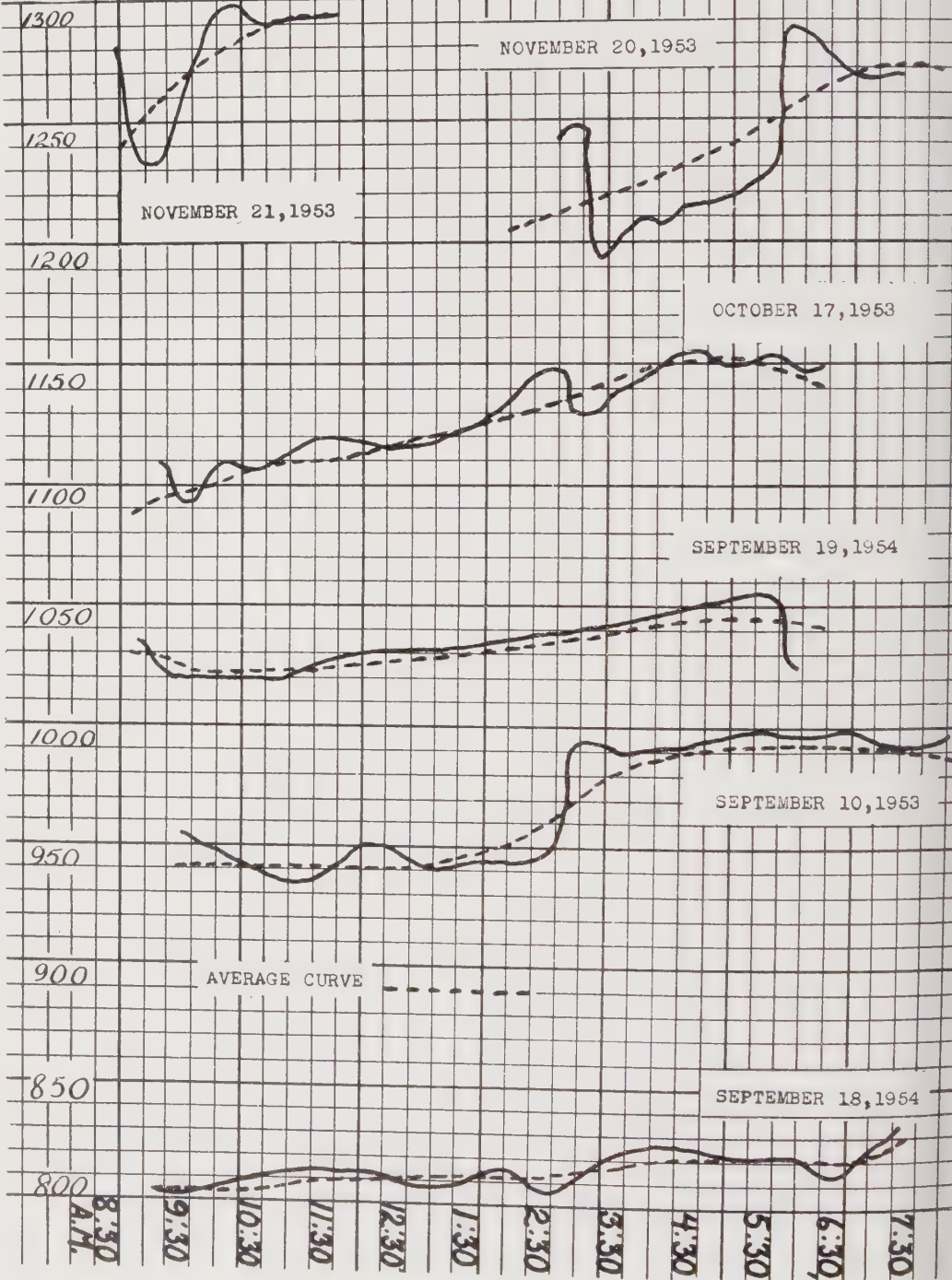
Stations were planned in advance for specific spots and the closest available area to that spot was chosen, if consistent with the considerations mentioned above. For stations on profile runs, 1000-foot distances were clocked off by automobile speedometer.

CORRECTIONS

Temperature was compensated for in the cork insulation construction of the magnetometer housing, and also by a special counterweight which shifts the center of gravity on expansion or contraction.

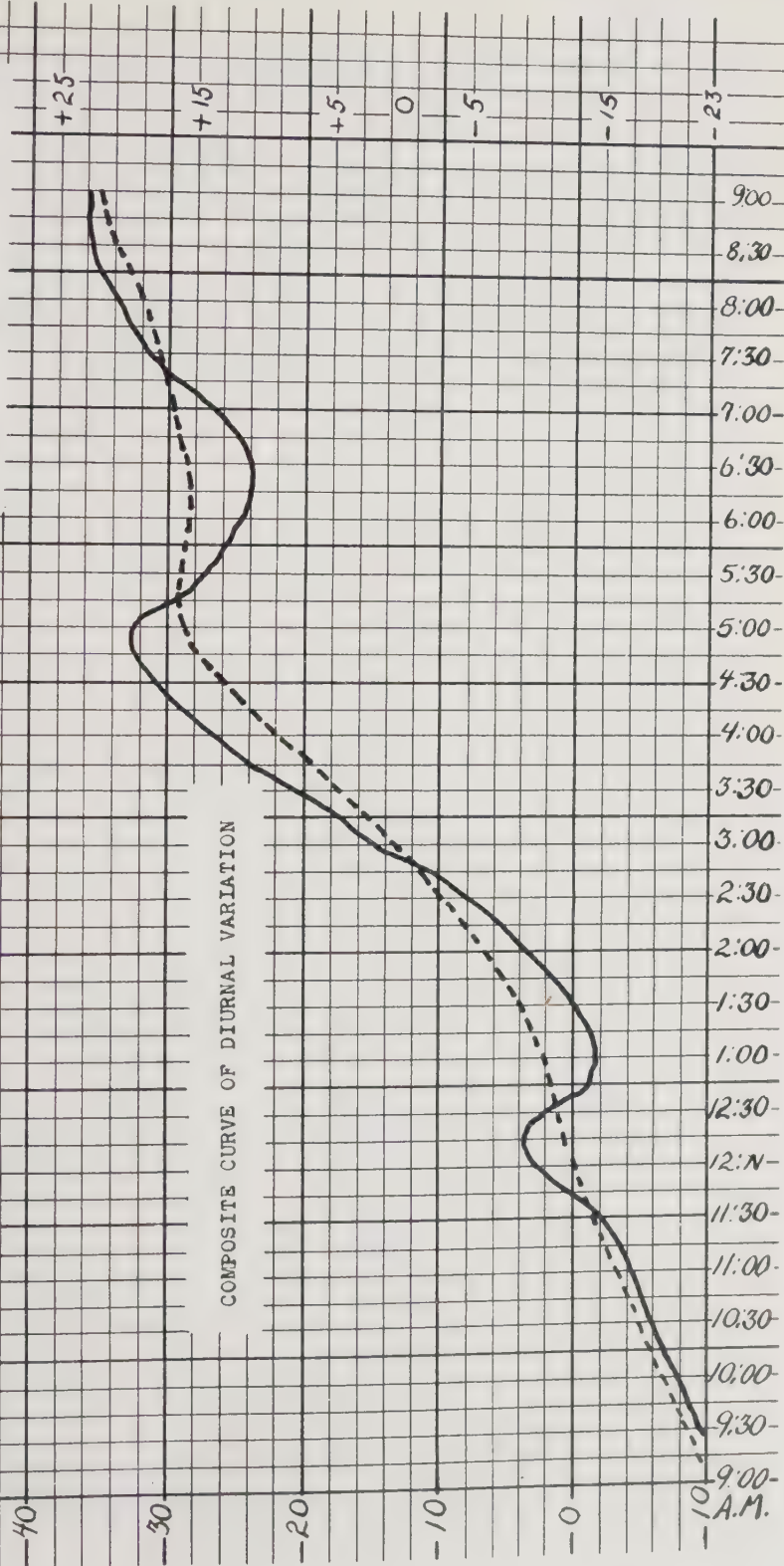
DIURNAL VARIATION CURVES

GAMMAS



GAMMAS DEPARTURE FROM 9:00A.M.

GAMMAS DEPARTURE FROM 3:00P.M.



believed to underlie the recent and cretaceous areas to the east. This is the structural picture of a serpentine anticline with the magnetic highs catching the concentrated intensities of that high angled plunge of the eastern limb of the serpentinite.

The structural hypothesis of Perlmutter and Arnow (Plate 3, Fig. 1) that the serpentinite is a homologous mass which joins the bedrock floor coming up from Brooklyn may be in error if we are to credit the magnetic highs with signifying some major break or discontinuity. The slickenslides on the eastern edge in Concord and elsewhere, together with the evidences of high angle dip (notably in the joint readings), seem to refute this hypothesis.

The crowding of the highs along the edge (if it can be isolated to structural reasons) may indicate some discontinuity of rock facies beneath. It is unlikely that the magnetic highs, crowded on the eastern edge, would occur if the serpentinite continued beneath the recent and cretaceous formations which are believed to make up the bedrock floor.

The conclusion is almost inescapable that at the eastern edge there is a discontinuity of rock facies. The magnetic highs reinforce this conclusion. It is not hard to believe that the Staten Island serpentine mass would follow the pattern of all other masses in this area, and elsewhere for that matter, and assume a stock-like shape through the metamorphic rock.

Crosby, in his 1914 work on physiographic relations of serpentine (see Bibliography), believed the serpentinite was a plug-like mass that expanded upward at a greater rate than area peneplanation, as a result of the serpentinization of an original peridotite type of body due to infiltrating waters. He believed this expansive method of local uplift was the type locality; hence he named it a "statenlith" (Plate 3, Fig. 3).

The presence of slickenslides also seems to support Crosby's theory of differential movement. The position of the magnetic highs might also be interpreted as confirming the supposition of an eastward dip to the "statenlith." On the western slope his picture of a schist floor beneath the Triassic finds no contradictory indication in the magnetic profile.

POSSIBLE MAGNETITE CONCENTRATIONS •

Mr. Behm's paper, "The Petrology of the Serpentinite of Richmond County," has a facies map of the serpentine (Plate 1). Agreement may be found between the magnetic highs and the

facies Mr. Behm describes as massive, talcose serpentized peridotite; also anthophyllite, talc schist and foliated serpentinite. His "dunite" spot at Pavilion Hill also produces a corresponding high on the magnetic contours. In general, it is the center of the serpentinite which makes no great impression on the magnetometer. On the basis of the chemical analyses presented in Behm's paper, those areas which show high magnetic intensity also have a high concentration of Fe_3O_4 (magnetite)—except at Brighton and Lafayette Avenues.

The eastern edge does average the highest magnetic intensity and the dunite and the St. George Horneblende schist present the most dramatic contrast.

The possibility of limonite mines being a source of secondary deposits, causing magnetite veins, in the eastern face of the serpentinite must be considered. The presence of high magnetic intensity along this eastern edge might indicate the presence of such a vein.

MAGNETIC MEASUREMENTS •

Through the kindness and interest of Dr. Balsley of the Geophysics Branch, U. S. Geological Survey, susceptibility and remnant magnetization measurements were made on oriented samples of the serpentinite. Only fresh unweathered specimens were chosen as representative of the mass. Mr. Behm was kind enough to assist in the choice and procurement of these samples.

REMNANT MAGNETIZATION

	<i>Azimuth</i>	<i>Inclination</i>	<i>Moment</i> <i>cgs (I)</i>	<i>Susceptibility</i> <i>cgs</i>
Old Mill Road	209	62	1.02×10^{-3}	1.0×10^{-3}
	193	68	1.5×10^{-3}	1.2×10^{-3}
Pavilion Hill (1)	198	63	1.23×10^{-3}	0.7×10^{-3}
	192	64	1.55×10^{-3}	0.8×10^{-3}
	(2) 210	54	1.2×10^{-3}	0.6×10^{-3}
	227	52	1.1×10^{-3}	0.58×10^{-3}
Clove Road	072	56	0.54×10^{-3}	0.47×10^{-3}
	081	54	0.54×10^{-3}	0.49×10^{-3}
Richmond	217	69	0.52×10^{-3}	0.15×10^{-3}
	218	68	0.4×10^{-3}	0.15×10^{-3}
Diabase (1)	130	65	1.4×10^{-3}	1.16×10^{-3}
	115	64	2.0×10^{-3}	1.5×10^{-3}
	(2) 106	74	1.9×10^{-3}	1.75×10^{-3}
	126	78	1.6×10^{-3}	1.42×10^{-3}

Susceptibility is the proportionality factor, different in each rock, which when applied against a generating field of magnetism (the earth's field in this case) will give the intensity of magnetization or I .

Remnant magnetization is that value of I retained in a rock by a previously induced magnetization in some direction other than its present one. The total I of a rock, therefore, is the vectorial addition of the two intensities. $I = KH + I_p$. A generalized average I for the serpentinite would then become the vectorial sum of the average susceptibility which is determined as $(.6 \times 10^{-3})$ multiplied by $(.6)$ the earth's field in c.g.s. units and the average remnant I (1.02×10^{-3}) which has an average azimuth of 208° and an average inclination of 60° . This vectorial addition makes the total field of the serpentinite 12.5×10^{-4} at an azimuth of 218° and at an inclination of 74° .

The total intensity therefore has a direction almost coincident with the strike of the serpentinite, which is about 40 degrees in azimuth.

CONCLUSIONS

The data found in this survey contribute to the support of the many hypotheses stated by geologists working in the area of the serpentinite, specifically concerning the following:

1. High magnetic intensities are found along the eastern edge of the mass. These findings do not refute any of the known theories advanced by scientists;
2. The low magnetic intensities indicated in the central part of the mass tend to concur with Britton's theory of a thin layer of serpentine at this central point, which is superimposed upon a different but unidentified rock;
3. Many other physical phenomena could produce the patterns displayed in the profiles traced, i.e.:
 - a. Deposit of magnetite;
 - b. Changes in polarization of the rock mass; or
 - c. Changes in the kind of rock masses comprising the area surveyed.

However, it will be understood that this survey cannot claim to establish the nature of the rock masses beneath the overburden, nor the genesis of the serpentinite. It is offered merely as a contribution to the data being accumulated towards the eventual solution of the problems concerned with the genesis, structure, and extent of the serpentine mass.

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ACKNOWLEDGMENTS

The author wishes to thank the following for their cooperation in the preparation of the foregoing article: Juan J. Behm, Research Assistant, Department of Micropaleontology, American Museum of Natural History; Renée Brilliant, Geology Department, New York University; and Robert F. Mathewson, Curator of Science, Staten Island Institute of Arts and Sciences.

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- BERLMUTTER, N. M., and ARNOW, T. (1953), *Ground Water in Bronx, New York and Richmond Counties*, State of New York, Department of Conservation, Water Power and Control Commission—Bulletin GW—32.

ACKNOWLEDGMENTS

The author wishes to thank the following for their cooperation in the preparation of the foregoing article: Juan J. Behm, Research Assistant, Department of Paleontological Sciences, American Museum of Natural History; Renée Brilliant, Geology Department, New York University; and Robert F. Mathewson, Curator of Science, Staten Island Institute of Arts and Sciences.



Poetry



The literary interests of the Institute's members have had little mention in the PROCEEDINGS over the years; nevertheless, the Belles Lettres Society, the Poetry Society, and The Fortnightly Club have been active in keeping together groups of people who do creative writing and whose major enjoyment is derived from good literature. We are glad to present poems written by two of our gifted members, Ethel Ericson and Willard M. Grimes. Ethel Ericson (Mrs. Casimir Redjives) has permitted us to reprint "Sea Gulls" and "Chrysanthemum Child" which appear in her volume *Cape Cod Woman and Other Poems*, published in London; also an excerpt from her poem "Returning Friends." Willard M. Grimes, as president of the Staten Island Poetry Society, has given us permission to reprint his "Moraine," which appeared in the Society's publication *Second Chorus*, and also his poem "Flowers." These poems appear appropriate for this issue since they were all inspired by nature on Staten Island.—Ed.

Poems by Ethel Ericson

Excerpt from

RETURNING FRIENDS

Soon a day will come
That I shall know
By some sure trick of heart,
When I must walk

A mile or two through leafless woods,
And bending low and looking close,
Sight small processions of my childhood friends,
Returning surely as they promised;

Pale blue hypanthias curling up
Through covers of dead leaves,
Spring beauties in fragile pink and white
Making a precious festival,
Clear white bloodroot
Flashing the look of beloved friends.
Kneeling to their small world,
I shall come face to face
With violets, dark and pale,

And the white bells of anemones
In low flowery spires
Flooring the vast, windy woods,
As sweetly simple as a song
A child sings softly to himself.

SEA GULLS

Swoop and drift, swoop and drift,
Under the storm-gray sky;
While the swirling grasses shudder and writhe,
When the wind goes scourging by.

Scream and fly, scream and fly,
Fearing for nests below,
But in depths of grass is a deep-green calm
That the winds will never know.

CHRYSANTHEMUM CHILD

Just as instinctively as I would fold
Protecting arms about a little child,
And search its eyes for sudden love and trust,
I bend above you, Child of God, and thrust
My hand beneath your head, splendid and wild
With windy hair like winter sunset gold.

Perhaps it is because you grow child-high,
And I can reach and love you as I will,
Or pause to feel you brushing by my side
The slender fingers of your leaves spread wide
In vague caresses wandering, until
You touch an ancient love that cannot die.

Poems by Willard M. Grimes

MORaine

(Evidence of terminal moraine found on Staten Island)

on this Staten Island hill
The glacial scourge that threatened half the world
halted. Still
rim boulders that were buried
at last onslaught lie about my feet
h fossil shells abandoned in retreat.
are not helpless while such symbols last.
hough man-made devastation sweeps the earth,
e speaks the past:
These hills may once again attest their worth,
ing anew a terminal moraine
ond which truth and freedom may remain."
e may we feel the ancient glow that met
he frightful menace of that prehistoric day.
ndle yet
he warmth within our souls to stay
hate that freezes up the hearts of men,
; they may melt in brotherhood again.

FLOWERS

I cannot wander in a wood so far
But, in the deepest shade,
Some violet like an earth-born star
Smiles at me unafraid.

There is no waste so desolate
But some courageous bloom
Dispels the bleakness of its fate
With dew-distilled perfume.

The crocus pushes through the snow
And flouts the blatant blast;
Blue asters in the pasture blow
When summer long is past.

I think that when from paradise
The sons of men were driven,
The angels donned a flower-disguise
To lure them back to heaven.

SECOND SUPPLEMENTAL INVENTORY OF GEORGE WILLIAM CURTIS COLLECTION

By
MABEL ABBOTT

SINCE the Supplemental Inventory of the Curtis Collection was published in these Proceedings, in April, 1951, the Institute has received a number of important accessions. Among these must first be mentioned four portraits (described in Proc. Vol. XIV, No. 1) which together constitute a record of George William Curtis's personal appearance from very young manhood until a few years before his death. For these we are indebted to the continuing interest of the Curtis family—specifically in this instance Mr. G. W. Curtis of Zephyr Springs, Florida, grandson, and Mr. Bridgham Curtis and Miss Constance Curtis, of New York, nephew and niece respectively.

Two gifts from the Connecticut Valley Historical Society, of Springfield, Mass., are valuable additions to research material. One, a series of scrapbooks containing clippings which evidently served Mr. Curtis as background and record of current events for his editorial work, now furnishes a chronological and contemporary view of his political and literary activities. The series seems to have been begun by Mr. Curtis's father, and the earliest clippings are dated 1828; the last book contains articles about Mr. Curtis's illness and death, perhaps collected by Mrs. Curtis. Also from the Connecticut Valley Historical Society is a quantity of correspondence which includes letters from some important figures of the period. Among these also are some not addressed to Curtis, and whose relation to his affairs must await clarification.

It is encouraging to find that our collection is now well enough known to attract to itself material which until now has been widely scattered and therefore of little use to students.

Portraits

Crayon, undated. Said by family to be the work of Burrill Curtis, brother of George William.

Crayon, undated. Probably by Rowse.

Crayon. By Samuel Lawrence, 1854.

Oil. By A. Perkins. Date uncertain.

Pamphlets

"Public Duty of Educated Men." Oration.

"Papers upon Spanish America," by A. E. Shepard, 1868. From Curtis's library.
Collection of Bulletins of the New England Public Society.

Photographs

One inscribed: "Yours in the Bonds. Presbyterian Prig."

One by Gutekunst, Phila., uninscribed.

Sarah Shaw, wife of Francis G. Shaw, with grandson, Frank Curtis.

Francis George Shaw, father-in-law of George William Curtis.

George William Curtis (photo by Appleton).

George William Curtis (photo by Bogardus).

Mrs. George William Curtis (Anna Shaw) with daughter who died young.

Lizzie Curtis, aged two.

Robert Gould Shaw.

Ellen Shaw (wife of Gen. Barlow).

Susanna Shaw (wife of Robert B. Minturn).

Col. Charles Russell Lowell (husband of Josephine Shaw).

*These ten
small photos
are gift of
Mrs. William
Tidball,
Wallingford,
Pa.*

Miscellaneous

Sketch-book of Christopher Pearse Cranch, used during voyage to Europe, 1847, in which he accompanied Curtis as far as Rome.

Letters

David Daggett to James Burrill, Jr.	Sept. 12, 1819
Beverly Johnson to Horatio Woodman	Apr. 16, 1853
Henry James to G. W. Curtis	July 19, 1854
(Illegible) to N. Gray	Dec. 11, 1860
Alfred B. Street to G. W. Curtis	Apr. 8, 1861
Erastus Hopkins to Chas. B. Johnson	Nov. 12, 1861
Nath'l Hall to G. W. Curtis	July 18, 1862
G. W. Curtis to "Mr. Farber" (Forbes?)	May 8, 1864
Alice M. Fowler to G. W. Curtis	Feb. 24, 1866
Ba? to G. W. Curtis	June 2, 1870
Eliot C. Clarke to G. W. Curtis	Oct. 26, 1870
R. J. Chene (Chf. Clk. Dept. of State) to Joseph H. Blackfan	July 1, 1871
_____ (last page missing) to Joseph H. Blackfan	July 5, 1871
Geo. E. Brown to Com. of Civ. Svc. Reform	July 7, 1871
J. W. Douglass to Hon. George S. Boutwell	Jan. 11, 1872
D. A. Walker to G. W. Curtis	Jan. 6, 1872
C. C. Parry to G. W. Curtis	Jan. 6, 1872
Alexr. G. Cattell to G. W. Curtis	Jan. 8, 1872
E. McPherson (Clk. House of Reps., Wash., D. C.) to G. W. Curtis	Jan. 10, 1872
C. A. Willard to G. W. Curtis	Jan. 10, 1872
M. J. Asch to G. W. Curtis	Jan. 10, 1872
C. C. Parry to G. W. Curtis	Jan. 12, 1872
Sam'l D. Campbell to G. W. Curtis	Jan. 12, 1872
I. K. Hord to "Mr. Elliott"	Jan. 19, 1872
William H. Day to G. W. Curtis	Jan. 22, 1872
A. E. Buck to Joseph Medill	Jan. 27, 1872

E. M. Quadling to Civ. Svc. Reform Board	Jan. 29, 1872
W. E. Munroe to Chmn. Civ. Svc. Com.	Feb. 1, 1872
Hamilton Fish to G. W. Curtis	Feb. 3, 1872
Thos. Houghton to G. W. Curtis	Feb. 5, 1872
James Abrams to Civ. Svc. Com.	Feb. 14, 1872
George H. Elliot to Pres. Civ. Svc. Com.	Mar. 2, 1872
Felix Spurgin to G. W. Curtis	Mar. 12, 1872
Silas W. Burt to E. B. Elliott (Treas. Dept.)	Mar. 25, 1872
W. M. M. to E. B. Elliott	Mar. 26, 1872
Wm. P. Patrick to Civ. Svc. Ref. Board	Mar. 26, 1872
Joseph Medill to G. W. Curtis	Apr. 3, 1872
B. P. Cowen to G. W. Curtis	Apr. 12, 1872
Fred'k Watts, Com. Agric. to G. W. Curtis	Apr. 18, 1872
Hamilton Fish to G. W. Curtis	Apr. 19, 1872
"33 Citizens" to G. W. Curtis	Aug. 9, 1872
Edwards Pierrepont to G. W. Curtis	June 10, 1874
Charles Nordhoff to G. W. Curtis	June 11, 1874
Fred. Taylor to G. W. Curtis	June 12, 1874?
Wayne McVeagh to G. W. Curtis	June 15, 1874
Wm. Walton Phelps to G. W. Curtis	June 16, 1874
John W. Chadwick to G. W. Curtis	June 24, 1874
Henry C. Potter to G. W. Curtis	June 27, 1874
W. H. Furness to G. W. Curtis	July 10, 1874
W. R. G. Millen to G. W. Curtis	Apr. 26, 1875
W. Sharpe to G. W. Curtis	Nov. 13, 1875
Clinton S. Merriam to G. W. Curtis	Jan. 13, 1876
J. W. Simonton to G. W. Curtis	Mar. 7, 1876
L. A. Slade to G. W. Curtis	Mar. 26, 1876
Luigi Monti to G. W. Curtis	Apr. 4, 1876
Ellis H. Roberts to G. W. Curtis	May 27, 1876
T. G. Younglove to G. W. Curtis	May 30, 1876
J. M. Cornell to G. W. Curtis	May 31, 1876
Mary Ballance Collins to G. W. Curtis	June 13, 1876
J. G. C. (Chadwick?) to G. W. Curtis	July 11, 1876
John G. C. (Chadwick) to G. W. Curtis	Sept. 27, 1878
William L. Stone to G. W. Curtis	Nov. 14, 1878
Chas. Taylor to G. W. Curtis	Dec. 10, 1878
R. W. Billow to G. W. Curtis	Dec. 19, 1878
H. N. Powers to G. W. Curtis	Dec. 23, 1878
Jeannette V. D. Charlier (?) to G. W. Curtis	Mar. 11, 1879
Henry S. Ranney to G. W. Curtis	Apr. 21, 1880
E. H. Johnson to G. W. Curtis	Apr. 22, 1880
W. G. Dix to G. W. Curtis	May 15, 1880
John D. Cutter to G. W. Curtis	May 22, 1880
Clinton L. Merriam to G. W. Curtis	May 22, 1880
Jas. F. Simmons to G. W. Curtis	June 14, 1880
Mrs. O. Langhorne to G. W. Curtis	Oct. 6, 1880
A. H. Hartley to G. W. Curtis	Oct. 26, 1880
R. W. Thompson to G. W. Curtis	Dec. 8, 1880
William J. Bok to G. W. Curtis	Nov. 30, 1881

J. M. Forbes to G. W. Curtis	Nov. 6, 1882
F. H. Howe to G. W. Curtis	Jan. 3, 1883
Henry W. Haynes to G. W. Curtis	Jan. 26, 1883
Samuel Longfellow to G. W. Curtis	Feb. 2, 1883
Maria Weston Chapman to G. W. Curtis	Nov. , 1883
———— Body to G. W. Curtis	Nov. 29, 1883
E. H. H gard to G. W. Curtis	Apr. 19, 1884
Isaac H. Clothier to G. W. Curtis	Apr. 23, 1884
J. H. Gilbert to G. W. Curtis	May 7, 1884
W. P. Garrison to G. W. Curtis	May 14, 1884
Mary A. D. B. er to G. W. Curtis	May 15, 1884
M. H. Furness to G. W. Curtis	Sept. 17, 1884
Annie A. Longfellow to G. W. Curtis	Oct. 11, 1885
Menu of Copyright Bkfst. (with many signatures)	Dec. 31, 1885
S. G. Bartlett to G. W. Curtis	Feb. 8, 1886
W. D. O'Connor to G. W. Curtis	May 15, 1886
F. M. Forbes to G. W. Curtis	Jan. 31, 1888
G. P. Bradford—Poem about his death (unsigned) circa	Dec. 3, 1889
H. L. Wayland to G. W. Curtis	Jan. 15, 1890
J. B. Bishop to G. W. Curtis	Jan. 15, 1890
Wm. H. Watson to G. W. Curtis	Mar. 4, 1890
———— Dix to G. W. Curtis	Mar. 17, 1890
George Bradford Bartlett to G. W. Curtis	Mar. 29, 1890
John G. Bourke to G. W. Curtis	Apr. 2, 1890
Henry M. Hilliard to G. W. Curtis	May 31, 1890
Louis Fitzgerald (vice-chmn.) and Richard Watson Gilder (secretary) Memorial Arch Committee	June 9, 1890
Sarah E. Leonard to G. W. Curtis	June 12, 1890
Wm. H. Baldwin to G. W. Curtis	June 13, 1890
Edward Curtis to G. W. Curtis	July 20, 1891
J. B. Bishop to G. W. Curtis	Sept. 8, 1891
Frank B. Carpenter to G. W. Curtis	Nov. 16, 1891
Francis Bullard to G. W. Curtis	Dec. 7, 1891
M. M. Allyn to G. W. Curtis	May 9, 1892
Wm. H. Holden to G. W. Curtis	May 24, 1892
Emily Alvord Howland to G. W. Curtis	June 4, 1892
Isaac H. Clothier to G. W. Curtis	June 9, 1892
Chas. F. Simons to G. W. Curtis	July 1, 1892
Mary E. Burt to G. W. Curtis	July 8, 1892
Addie R. Potter to G. W. Curtis	July 17, 1892
Cassius M. Clay to G. W. Curtis	<i>Undated</i>
Frederick Law Olmsted to G. W. Curtis	<i>Undated</i>
Henry P. Emerson to G. W. Curtis (first part of letter missing)	<i>Undated</i>
Charles Thompson, Passport	<i>Undated</i>
Autographs (Morton, Young, Buckingham, H. A. Wright, Fletcher Webster)	<i>Undated</i>
Programs, menus, etc. (signed)	<i>Undated</i>
D. W. Sedgwick to G. W. Curtis	May 22,
Geo. P. Bradford to G. W. Curtis	Apr. 2,

Augusta Astor to G. W. Curtis.....	May 16,
Grace Ashbourne to G. W. Curtis.....	Aug. 31,
Alonzo Alden to G. W. C. (?) (Only last page received)....	Undated
W. S. Burg to	Undated
Dan. O. Thompson to G. W. Curtis.....	Oct. 22,
Alvan S. Hall to	Dec. 13,
R. S. Storrs to G. W. Curtis	June 19,
"Lizzy" to G. W. Curtis.....	Undated
Mary J. Holmes to G. W. Curtis	Sept. 24,

Scrapbooks

I	1828 - 1837	XII	1869 - 1872	XXIII	1881 - 1882
II	1837 - 1854	XIII	1872 - 1874	XXIV	1882 - 1888
III	1856 - 1864	XIV	1874 - 1876	XXV	1883 - 1884
IV	1857 - 1863	XV	1876 - 1877	XXVI	1884 - 1888
V	1861 - 1861	XVI	1876 - 1880	XXVII	1888 - 1890
VI	1861 - 1877	XVII	1876 - 1888	XXVIII	1885 - 1889
VII	1861 - 1866	XVIII	1877 - 1878	XXIX	1888 - 1892
VIII	1862 - 1872	XIX	1878 - 1879	XXX	1888 - 1891
IX	1864 - 1866	XX	1878 - 1888	XXXI	1891 - 1892
X	1865 - 1867	XXI	1881 - 1881	XXXII	1892 - 1892
XI	1868 - 1869	XXII	1881 - 1881		

SCIENCE NOTES

By

ROBERT F. MATHEWSON

EDWIN RUNDLETT, Staten Island Arboriculturist for the New York City Park Department and recently appointed chairman of the National Median Iris Club, has perfected methods which enable him to extend the storing period of viable pollens. Heretofore the longest time that these (Iris) pollens have been successfully stored has been 88 days. Mr. Rundlett's work has extended this period for at least 30 days. The particular importance of this work is that it enables one to pollinate fall blooming iris with the pollens of the spring blooming varieties. The basic methods employed in these experiments were the uses of new dessicants and lower temperatures.

The following additions to the list of Staten Island Coleoptera are reported from the collections of Dr. William Loery:

<i>Cupesidae</i>	7744	<i>Cupes concolor</i> Westw., West Brighton 14 July 55. Night light.
<i>Bostrichidae</i>	12877	<i>Xylobiops basillare</i> (Say), Staten Island Museum 15 Sept. 55. Night light.

- Cerambycidae* 14177 *Tylonotus bimaculatus* Hald., West Brighton 12 July 35.
 14728 *Clytus ruricola* (Oliv), West Brighton 13 June 35.
 14912 *Cacoplia nebulosa* (Hald), Bucks Hollow 22 June 55
 on Oak.
 15152 *Oberea ocellata* Hald., Bucks Hollow 5 July 55 on
 Sumac.
-

A report on the annual Christmas Bird Count, submitted by Miss Mathilde Weingartner, follows:

Ten members¹ of the Institute's Section of Natural History braved chilling breezes and spent the day of December 26, 1955, in the field, counting and identifying our "feathered friends" for the National Audubon Society's annual Christmas Bird Count.

Although there seemed to be a shortage of some birds, such as chickadees, nuthatches, and downy woodpeckers, the observers did come up with some unusual finds.

Three pintail ducks, probably driven from their fresh water haunts by the freezing over of the lakes and ponds, were seen swimming about on the open salt water at Great Kills Park.

A woodcock, seen at the edge of a swamp in Clove Valley, was probably having a difficult time procuring its food, of which the greater part is made up of earthworms. Since the ground was solidly frozen, the woodcock lived on snails found at the edge of the stream, or may even have turned to the seeds of ragweed, sedges, or panic grasses.

Two Wilson's snipe, found in the same area, had an equally hard time finding crustaceans, fresh-water snails, or small fishes. They fed on the seeds of bullrushes, sedges, pondweeds and ragweed. Wilson's snipe had been found on several previous Christmas Counts; however, this year was a first record for the woodcock.

Purple sandpipers, which used to remain well north of the New York area, have invaded the shores of Staten Island and New Jersey. These birds feed on small crustaceans that live on water-washed rocks along the shore. It is probable that the building of new stone jetties, with the resultant increase in food supply, has caused these birds to come further south in recent years.

A red-bellied woodpecker was observed in the area near Lambert's Lane. This find was really unusual, since this bird rarely comes further north than Delaware along the eastern seaboard, even in the summer. Last year one turned up in the Greenwich, Conn. area. The fact that both Greenwich and Staten Island are near the coast, with relatively milder weather, may account for these rare appearances.

At a feeding station on Amboy Road in Prince's Bay, a yellow-breasted chat had been a regular visitor for two weeks prior to December 26. Since the owner, Mr. George Willmott, fed him well the chat put in an appearance on census day and allowed himself to be counted.

¹ The following observers, each of whom paid the fifty cent fee to have their reports published in Audubon Field Notes, took part in this bird count: Roger Christensen, Howard H. Cleaves, Barbara Cook, Lee A. Ellison, Fred W. Hopping, John A. LeMaire, Gordon Loery, Casimir Redjives, Hans Schleich, and Mathilde P. Weingartner.

Two hundred forty-eight cowbirds, a very large flock, were seen by Roger Christensen in the swamp at the head of Clove Lake.

Seven evening grosbeaks were observed at Mr. Cleaves's feeding station. They had been seen feeding there many times before.

Following is a list of the 57 different species and 13,979 individual birds seen on December 26:

Horned Grebe 17	Downy 14
Double-crested Cormorant 6	Prairie Horned Lark 33
Mallard 7	Blue Jay 50
Black Duck 583	Crow 31
Pintail 3	Chickadee 22
Scaup Duck 1237	White-breasted Nuthatch 6
American Golden-eye 43	Catbird 1
Bufflehead 63	Robin 44
Old Squaw 34	Starling 3778
White-winged Scoter 2	Yellow-breasted Chat 1
Red-breasted Merganser 7	English Sparrow 132
Cooper's Hawk 2	Meadowlark 6
Red-shouldered Hawk 2	Redwing 75
Sparrow Hawk 4	Rusty Blackbird 12
Pheasant 11	Purple Grackle 2
Killdeer 13	Cowbird 248
Woodcock 1	Cardinal 28
Wilson's Snipe 2	Evening Grosbeak 7
Purple Sandpiper 10	Purple Finch 1
Sanderling 5	Goldfinch 14
Great Black-backed Gull 59	Towhee 1
Herring Gull 6474	Slate-colored Junco 23
Ring-billed Gull 7	Tree Sparrow 119
Bonaparte's Gull 513	Field Sparrow 9
Mourning Dove 24	White-throated Sparrow 112
Screech Owl 2	Swamp Sparrow 1
Kingfisher 1	Song Sparrow 35
Flicker 1	Snow Bunting 40
Red-bellied Woodpecker 1	

Robert Mathewson, due to circumstances beyond his control, was unable to take part on December 26, and therefore covered his area (mostly the Fresh Kills Garbage Dump) on December 31. On that cool and windy day he noted the following species:

Black-crowned Night Heron 1	Mourning Dove 2
Mallard 4	Blue Jay 5
Black Duck 350	Crow 60
Sparrow Hawk 2	White-breasted Nuthatch 5
Pheasant 2	Starling 750
Cooper's Hawk 1	English Sparrow 6
Great Black-backed Gull 70	Redwing 3
Herring Gull 22,000 ²	Junco 30
Laughing Gull 16	Swamp Sparrow 2
Bonaparte's Gull 700	Song Sparrow 5

² This count was a careful estimate of the number of gulls in the area. Mr. Mathewson feels that the number of birds at the garbage dump has probably reached a saturation point, and that only if the Department of Sanitation should spread the exposed garbage over a larger area, would more gulls be able to find room and food in this area.

BOOK REVIEWS

EVOLUTION, GENETICS, AND MAN, by Theodosius Dobzhansky. John Wiley & Sons, Inc., New York, N. Y. 1955. 398 pp. \$5.50.

Among the branches of biology which have made the most rapid progress in recent years are those disciplines contributing to the maturation of evolutionary concepts. It is therefore not surprising that a new book with a new approach should now be published. Its author is Dr. Theodosius Dobzhansky, world renowned authority on population genetics and foremost pioneer in this aspect of biological science. Dr. Dobzhansky has crammed into three and a half hundred pages a stimulating, readable, critical evaluation of the mechanics of evolution for both the beginning student and the intelligent layman. In this book the author clearly states the exact limits of our knowledge and the problems lying before us. He concentrates on the evolutionary problems that are related to man although he profusely illustrates his text with examples from other animals. He admits to the latter only because of the poor experimental nature of the human species. His emphasis is on man because of the average citizen's natural anthropocentric values. Despite the center of interest, this book will interest students, laymen, and all biologists.

The organization in this book is unique. The author's viewpoint is always genetical. The classic approach of first discussing the contributions of comparative anatomy, comparative embryology and paleontology to our understanding of evolution is abandoned. These are interwoven in a genetic background and the theme is population genetics first and always. The dynamics of the evolutionary process are always kept in mind whether the discussion involves rust resistance of wheat, insecticides and pest evolution, antibiotics and bacteria or the cultural evolution of man. Dr. Dobzhansky has the unusual ability of making usually difficult concepts (such as the Hardy-Weinberg law, genetic drift, etc.) understandable and simpler concepts self evident. Outside the field of population genetics one may dispute some controversial points and some rare minor misstatements but none that in any way detract from the text. Reading this book the trained biologist will find refreshing evaluations and the layman can expect the opening of new horizons of thought and speculation.

MAX HECHT

LIVING MAMMALS OF THE WORLD, by Ivan T. Sanderson. Hanover House, Garden City, N. Y. 1955. 303 pp. \$9.95.

Mr. Sanderson succeeds reasonably well in this book in presenting a comprehensive survey of the mammals of the world. The text is fluent and makes interesting reading. The presentation follows a formal pattern in which each of the nineteen Orders of mammals is discussed successively. The emphasis is placed upon classification and distribution, but some information is given on the habits of each of the groups under discussion. The major divisions (Orders) are broken down for further treatment into subheadings which chiefly represent the Family level, but in some cases

Virginia, and New Hampshire. The author reports the continuous battle between the public and the defrauders with respect to false coin and paper currency. The story is replete with flogging, ear-cropping, and the pillory for some offenders and the death penalty for others. The public authorities in tracking down the primary source of spurious money are struggling with their inability to control counterfeiters in other colonies and in Europe. Many of the passers of counterfeits who claim innocence of the fact that the money they passed was spurious are nevertheless trapped.

The primary source of the author's information is the contemporary newspaper accounts of the counterfeits as well as the trials. His task of reading the unindexed press covering a period of about one hundred years is well rewarded with findings not otherwise possible. He has substantially helped the collector by presenting facts as to the denominations and issues counterfeited. He has shown that in spite of the difficulties confronting them, the public and the law enforcement agencies captured several gangs of counterfeiters as well as many individual artisans.

It is interesting to note that the most famous of Colonial printers, Benjamin Franklin, whose name is found on all paper money issues from his press, was not spared from the counterfeiters' machinations. Poor Richard must have been irritated.

The conclusion one must draw from this phase of early American life seems to be that crime didn't pay, but counterfeiting often did.

ERIC P. NEWMAN

THE GLUTTON'S PARADISE, by Hans Hinrichs.* Peter Pauper Press, Mount Vernon, New York, 1955. 35 pp.

Hans Hinrichs has had a very good time writing his *Pleasant Dissertation on Hans Sachs's "Schlaraffenland" and Some Similar Utopias*, and anyone can have a very good time reading it. He begins with a delightful verse translation of Sachs's own *Schlaraffenland* in which the "roast chickens . . . fly into your mouth." The rollicking original is not at this moment available to the reviewer, but it would seem that Hinrichs has aptly captured its freshness and gay spirit while avoiding its crasser vulgarities.

There follows a brief account of utopias as presented by Greek, Latin, English, Italian, German, and French writers. Page 14 contains several errors: the author calls Lucian "a contemporary of Plato and Plutarch." Plutarch died in 120 A.D., about the year in which Lucian was born, and could therefore almost be called his contemporary; but Plato (at least the Plato of the *Timaeus* and the *Republic*, whom Hinrichs seems to mean, since he mentions him again as such on page 31) was born in 427 B.C. In the paragraph on page 14 which is under discussion the name of the ruler of the Isles of the Blessed is printed as Phadamanthys instead of as Rhadamanthys.

Hinrichs mentions artistic and musical works which have a utopia as subject. Among the literary expressions of utopia he omits several, no doubt through lack of space. For example, he mentions More's *Utopia*

* Staten Island resident.

but omits Butler's *Erewhon*; he mentions Rabelais's *Pantagruel* but omits Cyrano de Bergerac's *Voyage to the Moon*. His conclusion is refreshing, commemorating as it does the American deep southern Diddy-Wah-Diddies, Beluthahatchies and Heavens.

The Peter Pauper Press has issued a handsome book in rose binding with reproductions of woodcuts from Sachs's work, of Romandini's *Paese di Chucagna*, and of Homann's map and Breughel's paintings of "Schlaraffenland."

AURELIA GREETHER SCOTT

THE SUN AND ITS INFLUENCE, by M. A. Ellison, Sc.D., F.R.S.E. The Macmillan Company, New York, N. Y. 1955. 235 pp. \$4.50.

Near the outer end of one spiraling arm in the vast stellar pinwheel known as the Milky Way is a medium sized star of no particular astronomical distinction. It is but one star of its class among uncounted billions. But to earthbound man this obscure ball of glowing gas called the sun is the most dazzling and the second most important object in the universe. To it man looks for his origins—and his sustenance. To it, also, he has looked and continues to look for much of his knowledge of the universe. Much of what he has learned about heat, geomagnetism, cosmic rays, the atmosphere, and other areas of knowledge has been learned by examining the one star in all the universe whose surface he can see.

For these reasons *The Sun and Its Influence* by Dr. M. A. Ellison, principal scientific officer of the Royal Observatory, Edinburgh, ranks as a work that no layman alert to the forward march of knowledge can afford to omit from his list of required reading. Dr. Ellison's volume is handsomely printed, beautifully illustrated and priced substantially below most similar volumes that have appeared during the years since World War II.

In addition to discussing "plasma oscillations" and other electromagnetic phenomena unsuspected a decade or so ago, Dr. Ellison describes the new instruments for the study of the solar atmosphere and shows how solar radiations give rise to remarkable terrestrial effects. He deals with the new knowledge of solar flares and the showers of particles which reach us from the sun; the influence of these upon the earth's magnetism and upon radio reception as well as discussing the sun as a radio broadcasting station in its own right.

Although aimed primarily at workers in other fields of science who wish to keep abreast of advances in astronomy, Dr. Ellison's treatment is essentially popular and hence readily accessible to laymen with a knowledge of elementary physics who enjoy their facts with only the thinnest film of sugar coating.

C. L. STONG



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